—THE—

Therapeutic Gazette.

Whole Series, Vol. IX. | Detroit, November 16, 1885. | Third Series, Vol. I. No. 11.

CONTENTS.

Original Communications.

PAGE

The Treatment of Acute and Chronic Pleurisy in the New York Hospitals. By Sollace Mitchell, M.D..... 721
Some Remarks on Antiseptics, especially Yellow Oxide of Mercury and Acetate of Alum. By A. Rose, M.D. 724
Carbohydrate and Fatty Foods. By N. A. Randolph, M.D..... 732
Points in the Treatment of Asthma. By E. Chenery, M.D..... 738
Unusual Effects of Malaria. By J. J. Norwine, M.D..... 740

Leading Articles.

Broths and Soups..... 741
Urethan, a New Hypnotic..... 742
Contribution to the Doctrine of Fat-Absorption..... 743
Notes on Cocaine..... 744
The Preparations of Rhamnus..... 745
The Treatment of Sunstroke..... 745
Apomorphine in Opium-Poisoning..... 746
Pyridine..... 746
Pharmacopœias..... 746
Old Bourbon Whiskey..... 747
Antipyrine in Articular Rheumatism.... 747

Reports on Therapeutic Progress.

The Incompatibility of Chloral Hydrate in the Presence of Potassium Bromide and Alcohol..... 740
Puerperal Diphtheria..... 748
Orcine..... 751
Results of Investigations regarding some New Drugs..... 751
Effect of the Carlsbad Cure on the Digestive Functions..... 751
A New Hæmostatic..... 753
Enteroraphy with the Employment of a New Form of Suture..... 753
Lantonine, a New Alkaloid..... 754
Cocaine in Hay Fever..... 754
The Indications for the Cæsarean Section 755
A New Instrument for the Removal of Polypi..... 756
Treatment of Chorea..... 756

PAGE

The Fluid Extract of Camellia and Hyoscine Hydrobromate in the Treatment of the Insane..... 757
Epilepsy caused by Dental Caries..... 758
Epithelioma of the Eyelid removed by Applications of Benzol..... 758
Liebig's Extract of Meat..... 758
The Treatment of Tænia by Chloroform 759
Therapeutics of Whooping-Cough..... 759
Action of Hydrobromate of Hyoscine... 760
On Bromide of Camphor..... 761
Prevention of Laceration of the Perineum..... 761
On Cotoine..... 764
The Treatment of Dysentery..... 764
Therapeutic Employment of Terpine... 765
The Therapeutic Use of Iodoform Collodion, especially in Neuralgias..... 766
Untoward Effects produced by Antipyrine..... 766
A New Surgical Dressing..... 766
Varicose Veins..... 767
Cocaine in the Morphine Habit..... 767
A New Therapeutic Principle in the Use of Mineral Waters..... 768
The Physiological Action of some of the Preparations of Hydrastis Canadensis (Golden Seal)..... 768
A Case of Tetanus Infantum successfully treated..... 769
A Contribution to our Knowledge of Antipyrine..... 769
Action of Nitro-Glycerin on Nephritis .. 770
On the Antizymotic Action of Quinine in Typhoid Fever..... 770
Injections of Ether in Sciatica..... 771
Treatment of Acute Epididymitis with Subnitrate of Bismuth..... 771
Chloroform as an Hæmostatic Agent.... 772
Cannabis Indica as a Narcotic..... 772
Therapeutic Notes on Diabetes Mellitus, with Especial Regard to Salicin.. 772
The Drainage of Ulcers and Surface Wounds..... 773
Eruptions following upon the Use of Antipyrine..... 773
Cocaine in Nervous Cough, Whooping-Cough, and Trigeminus Neuralgia..... 774
The Therapeutic Value of Chloride of Calcium..... 774
The Medical Treatment of Uterine Hemorrhage..... 775

PAGE

The Employment of the Hippurates of Lime in Therapeutics..... 775

Reviews..... 776

Correspondence.

Treatment of Dropsy with Saline Cathartics..... 782
Rare Sequel of Typhoid Fever..... 782
Chloroform Treatment of Tape-worm... 784
Berlin Letter..... 784

Notes and Queries.

Koumiss..... 785
Poisoning by Chloroform..... 785
Poisoning by the Seed of Datura Stramonium, with Recovery..... 786
A Case of Atropine-Poisoning successfully treated by Jaborandi..... 787
Euonymin..... 787
The Ordeal Bean of Madagascar..... 788
Paraldehyde an Antidote to Strychnine. 788
Curious Symptoms the Result of Snake-Bite..... 788
Œdema of Glottis following upon the Therapeutic Administration of Iodide of Potassium in a Case of Tabes..... 789
Cocaine in Reflex Diarrhœa of Teething 789
Treatment of Itch..... 789
The Death of M. Charles Robin..... 790
Treatment of Habitual Constipation..... 790
Coca-Leaves in Gastralgia..... 790
Treatment of Congestive Dysmenorrhœa..... 790
Cocaine in Sea-Sickness and Cholera Nostras..... 791
Salicylate of Methyl..... 791
A New Mydriatic..... 791
The Treatment of Nævus by Ethylate of Sodium..... 791
The Treatment of Hydrocele by Injections of Corrosive Sublimate..... 791
Adonis Cupaniana..... 791
Yerba Santa and Grindelia Robusta in Bronchitis..... 792
Chromic Acid in Diseases of the Nose and Pharynx..... 792
Treatment of Vesical Irritability..... 792
The Constant Use of Chloroform..... 792
Therapeutic Application of Lactic Acid 792

Original Communications.

THE TREATMENT OF ACUTE AND CHRONIC PLEURISY IN THE NEW YORK HOSPITALS.

By Sollace Mitchell, M.D.

IN Bellevue Hospital about one hundred and fifty cases of pleurisy are treated every year. It is exceedingly rare to get a case of acute pleurisy in the first stage, except where patients already in the hospital for some other trouble, either medical or surgical, develop pleurisy; but provided a case is seen in these first few hours of the disease, the treatment is as follows:

Opium is given in some form, preferably Dover's powder, or hypodermically in Magendie's solution; the effect of the drug being twofold, for besides relieving the patient's pain and nervous manifestations, it checks, to some extent, the determination of blood to the inflamed pleuræ.

The bowels are opened by means of a saline purgative; mustard-poultices or turpentine stupes are applied to the chest.

The pain caused by the movements of the lungs in inspiration is greatly relieved by strapping, with strips of adhesive plaster, the affected side, thus mechanically lessening the movements of respiration. Tr. aconite is given in ♏ ½ doses every fifteen minutes for two hours, and afterwards q. 2 h. until pulse

shows signs of becoming feeble. For the first twenty-four hours quinine is administered in gr. x q. 6 h. If the disease now passes into the stage of effusion, the patient is put upon a diuretic, consisting of,—

℞ Sacch. alb.,
Potass. bitart., āā ʒi;
Aquæ, Oi. M.
Sig.—ʒi ad lib.

The saline cathartics are kept up, and a local application of some form of iodine is made. Another form of local application, which is a favorite in some of the divisions of the hospital, is to cover the affected chest-wall with punctate cauterizations by means of a Paquelin's cautery, applications being renewed every other day.

Tonics are given and continued on into the third stage, the formula usually prescribed being,—

℞ Strychninæ sulph., gr. i;
Liq. potass. arsenitis, ʒii;
Cit. ferri et quininæ, ʒiv;
Glycerinæ,
Aq. cinnamomi, āā p. e. ad ʒviii. M.
Sig.—ʒi after meals, and with this is often given whiskey ʒi t. i. d.

The cough which so often attends pleurisy is allayed with,—

℞ Morph. sulph.,
Potass. cyanid., āā gr. ii;
Syr. tolutan.,
Syr. pruni virg., āā p. e. ad ʒii. M.
Sig.—ʒi p. r. n.

Blisters are rarely applied to the chest, as they cause the patient considerable inconvenience, and interfere with the physical examination of the chest from day to day.

Paracentesis is performed in the sixth interspace mid-axillary line, if the effusion is so great as to cause much dyspnœa; the fluid is withdrawn slowly, stopping at the moment the patient begins to cough or feel other unpleasant symptoms. The effusion, they believe, is never changed to a purulent one by mere tapping; but this is either due to unclean instruments, or the fluid was destined from the start to become purulent.

In the chronic form of this disease the patient is put upon tonic treatment, diuretics, and mild cathartics. Counter-irritation is kept up. One of the most effective, and at the same time least objectionable, methods to the patient, is the use of what is known in this hospital as Corson's paint, the formula for which is,—

℞ Ol. tiglii, ʒii;
Ætheris, ʒiv;
Tr. iodinii co., q. s. ad ʒii. M.
Sig.—Paint with camel's-hair brush every morning.

This produces a beautiful crop of pin-head blisters, with very little annoyance to the patient. Aspiration is resorted to when the fluid does not become absorbed. At first a few drachms are removed by means of a hypodermic syringe, the idea of this being, that if nature is assisted in the elimination of the fluid even to this small degree, afterwards absorption goes on rapidly. Theoretical as it seems, the practice of this simple procedure often brings about a successful issue, and further aspiration is not called for. Still, cases do occur where more radical methods must be employed, and then paracentesis is performed. Resection is rarely practised, and is confined to one or two of the divisions of the hospital; the other divisions treating the cases of empyema by means of free incisions and two rubber drainage-tubes, after first giving simple aspiration a fair trial.

Where drainage-tubes are used, the pleural cavity is washed out daily with either a 1 to 5000 solution of bichloride of mercury, or with Thiersch's solution, which is,—

℞ Acidi boracici, ʒss;
Acidi salicylici, ʒss;
Aquæ, Oii. M.

This solution is preferable, as not the slightest harm can ever come from its use, no matter how much may be retained. Tonics and fresh air form an essential part of the treatment. For the night-sweats which so often occur the following is given:

℞ Atropinæ sulph., gr. $\frac{1}{120}$;
Acidi sulphurici aromat., ♏ x;
Aquæ, q. s. ad ʒi. M.
Sig.—ʒi at bedtime, and repeated if necessary.

In St. Luke's Hospital a patient with acute pleurisy is put upon fluid diet. This consists of milk, if agreeable to the patient; otherwise rice or oatmeal gruels are used. Morphine is given in gr. $\frac{1}{12}$ to $\frac{1}{8}$ doses, the indication being to relieve pain. The bowels are opened by a mild cathartic, preferably a saline, and occasional small doses are given throughout the disease.

Bleeding is never practised. As a local application to the chest, they depend upon the tr. iodine painted on twice daily, and also upon the iodide of potassium ointment, which is a very satisfactory way of applying iodine,

and is much pleasanter to the patient than the tr. iodine, which, if continued long, produces vesication.

After effusion has taken place,—and this has usually occurred when the patient is first seen,—a diuretic is prescribed. The favorite ones with the visiting physicians are the citrate and acetate of potassium and spts. ætheris nit. More recently favorable trial has been made of glonoin ♏i doses three times a day, and also of caffeine in gr. v doses, t. i. d. As an antipyretic, antipyrine is no longer used. For a time it was given trial, but gave way to hydrochinon, which is another of the synthetical antipyretics similar to antipyrine. Hydrochinon is given in gr. xv to xx doses, repeated as often as may be necessary.

Careful experiments were made by Dr. Francis Kinnicutt, one of the visiting physicians, as to the value of hydrochinon as an antipyretic. A series of fifteen cases were watched. Among these were three cases of pleurisy with effusion.

The conclusions arrived at were that hydrochinon in gr. xv to xx doses was a perfectly safe antipyretic, that it invariably reduced the temperature from 1.5° to 5.2°, but that the antipyretic effect of single doses is temporary, and, unless the doses are repeated, the temperature will return to its former elevation in from two to four hours.

Hydrochinon is still in use in this hospital, and is spoken of very highly by the medical staff.

Occasionally, when the effusion is very great, they have recourse to tr. physostigma to produce diaphoresis.

As soon as the effusion has ceased and absorption begins, the patient is put upon tonics, such as whiskey, cod-liver oil, Trommer's extract of malt, citrate of iron and quinine, nux vomica, and tr. chloride of iron.

In chronic pleurisy the same medication as regards diuretics and cathartics is employed, together with the local application of the ointment of iodide of potassium. Iodide of sodium is given in preference to the potassium salt, beginning with gr. v doses t. i. d. and rapidly running up to gr. xx t. i. d. Aspiration is done, first trying the effect of the removal of a small amount of the fluid. If no effect from this, then paracentesis is performed in line of inferior angle of scapula, and the most of the fluid withdrawn. In the suppurative form of pleurisy the staff speak highly of resection and the use of two drainage-tubes, with daily irrigation with 1 to 5000 solution of bichloride of mercury. A case just discharged from the hospital was treated in this manner, and cure resulted without any perceptible deformity.

So pleased are they with this method of treating empyema that they employ it in almost every case.

At St. Vincent's Hospital pleurisy in its acute form is treated by local applications to the side affected of hot poultices of flaxseed and mustard, dry cups, and, later on, co. tr. iodine and co. iodine ointment rubbed in twice daily. Morphine is given to relieve the restlessness and pain, and a simple cough-mixture if necessary.

Stimulants are employed from the first, and given as the pulse indicates. In chronic pleurisy blisters are put upon the affected chest-wall. Iodide of potassium is given internally in increasing doses, beginning with gr. v t. i. d. Aspiration is performed if resolution is slow.

Empyema is treated by aspiration, and never by resection, claiming that they get good results from simple aspiration, while they have seen terrible deformities left over after resection of ribs.

Presbyterian Hospital. A patient admitted with acute or subacute pleurisy is cupped, and then blisters are applied; diuretics and antipyretics given, also stimulants if necessary.

As regards the antipyretic used, after experimenting for some time with kairine, antipyrine, thalline, and hydrochinon, they have gone back to antipyrine, and give it without any fear of serious consequences, claiming that they have never seen any bad effects from its use, and do not consider it necessary to give alcoholic stimulants, nor digitalis in combination with it.

Quite frequently a rash resembling that of scarlet fever has been noticed to follow its use.

Antipyrine is given here in gr. xx doses, repeated every hour until three have been taken.

Paracentesis is performed as soon as any marked dyspnœa is present, and the operation is repeated as often as it may be necessary in the course of the disease. Tonic remedies, such as quinine and iron, are given.

For chronic pleurisy, iodide of potassium, blisters, Paquelin's cautery, tonics, and aspiration, if necessary, are used.

In empyema they have obtained very good results from resection of ribs, and patients are left with scarcely any deformity. A patient just discharged cured had three ribs resected, and is left without any deformity. The cavity is washed out daily with a very weak solution of carbolic or boracic acid.

SOME REMARKS ON ANTISEPTICS, ESPECIALLY YELLOW OXIDE OF MERCURY AND ACETATE OF ALUM.

By Dr. A. Rose, New York.

IN the *Medical Record*, April 25, 1885, I published a little paper entitled "Dyspepsia Septica and Schaffer's Aseptic Treatment of the Alimentary Canal," in which I spoke of the yellow oxide of mercury as an internal antiseptic. As far as I am aware, this preparation was first recommended by Dr. Schaffer for internal use. Since the publication of this paper I have had occasion to confirm all the praise Dr. Schaffer bestowed upon this drug. I saw, especially, most gratifying results from its administration in cases of gastric and intestinal disorder of children during the past unusual warm summer months which we had in this city. Indeed, the antiseptic tablets of yellow oxide of mercury acted almost as promptly as an antiseptic of the alimentary canal as most antiseptics act when applied to wounds. I have come to the conclusion that the form of compressed tablets, yellow oxide of mercury 0.0003 ($\frac{45}{10000}$ grain), sugar 0.09 (1⅓ grain), is, in many respects, the most convenient and eligible form for administering the drug.

The powder, as prescribed by Schaffer, would decompose after a short while, and, besides, the weighing of such small fractions of yellow oxide of mercury for each case would require unusual care and be manifestly inconvenient, if not impracticable.

In my previous paper I said, "Experience will have to decide whether yellow oxide of mercury or sublimate are to be preferred in the aseptic treatment of the alimentary tract."

In a recent publication, "Zur Verallgemeinerung der Antiseptik," *Allegem. Med. Zeit.*, 1885, Schaffer himself has decided this question in showing the peculiar pharmacological qualities of the yellow oxide, and its mild but *lasting effect.*

Availing myself to some extent of Schaffer's paper, I shall speak first of some general topics before I discuss the special remedies which form the subject of this paper, and finally, I wish to speak of an antiseptic preparation for external use which I prefer to any other.

It is to be regretted that the name and the principle of antiseptis was not known from the earliest times that antiseptis was employed, since sepsis was employed in medicine and surgery from the oldest times. How much more advanced would we be, how many errors would have been avoided, if certain procedures and methods had been classified under the name "Antiseptik"!

How interesting it is now to think that the old Egyptians practised asepsis by preventing the putrefaction of the bodies of their dead! The old civilized nations placed their dead in oil, in balsamic liquids, in honey, or poured resinous substances or melted wax over them. All this was aseptic to some extent, but the method of the Egyptians, which we find applied in the preservation of mummies, resembles most closely the dressing of Lister. Every mummy is enveloped in numerous layers of byssus, intermediate spaces are filled with gauze impregnated with substances containing (carbol) resins and balsams, the whole covered with layers of asphalt or with mackintosh.

Syphilis, the very type of chronic infectious diseases, should have given a logical basis for the understanding of similar processes which only have other names and other courses, had it been understood that the treatment of syphilis by mercury was antiseptic, and syphilis itself a septic condition.

But more to our present subject. When I read the reports of lengthy and learned discussions on nervous or asthenic dyspepsia, so much in vogue lately, it seems to me that the fact of septic conditions of the stomach and its contents and the action of certain drugs as antiseptics is often overlooked.

Observation teaches us that in antisepsis we possess *one uniform* weapon against many apparently widely differing pathological conditions.

According to the systems of Rademacher, known by the preceding generation, there were to be employed special pharmaceutical preparations for each individual organ or region of the body. How much would the advocates of such therapeutics be surprised if they could learn of the antiseptics of which one may serve for all organs, and sometimes in widely differing diseases!

Perhaps a new antiseptic preparation may be discovered, or we may learn to employ one of those known in such manner, forms, or modifications that only one may serve for all antiseptic purposes.

Through Koch's researches we have learned of the germicidal power of the different antiseptics. We have also been informed that the metallic bodies in general produce much stronger effects in the destruction of microorganisms than the organic compounds, and we all know that mercury as a germicide ranks very high.

In the employment of mercury, internally as well as externally, the border between its healing and poisonous action has not always been carefully enough recognized; hence its application in entirely too strong doses or the selection of the inappropriate preparations. In one word, the ignorance in regard to the pharmacological properties of the different preparations of the drug has been the cause preventing the good qualities of the drug from being sufficiently appreciated. It is on account of this ignorance, also, that this important drug has fallen into disrepute.

Now mercury is, so to say, introduced a second time; and, as we shall see farther on, there have at this early date already been made such great mistakes in its employment, that it is to be feared mercury will be abandoned again if we do not inform ourselves better of its interesting pharmacological and physical properties.

When we mention facts which have brought mercury into disrepute, and when we speak of some peculiarities regarding its use which might do the same thing over again, it is only for the purpose of securing the better preparations of mercury a well-merited place among our best and most reliable therapeutical agents.

Concerning the inorganic pharmaceutical preparations, it is first of all important to know in which form they have to come in contact with the living organism in order to develop their therapeutical effects.

To illustrate this let us consider iodine. Chemically very powerful, iodine for surgical antiseptic purposes can only be employed in the form of iodoform. This latter produces a milder, and at the same time a *lasting* effect, instead of the rapid action of the pure iodine.

Where a prompt antiseptic effect internally is required, as, for instance, in certain septic conditions of the stomach manifesting themselves in violent vomiting, we employ pure iodine. According to my experience 2 drops of tincture of iodine given in a tablespoonful of ice-water every two hours is one of the best means of arresting severe vomiting.

In the paper on dyspepsia septica I have already spoken of iodide of potassium as an internal antiseptic. Here I wish to add that iodide of sodium, sodium being the proper base, should be preferred. In tincture of iodine we notice the rapid antiseptic action, in iodide of sodium the lasting. Tincture of iodine and iodide of sodium or potassium have both been employed in typhoid fever, the latter preparation has even been spoken of as a specific against this infectious disease, and all this long before it was understood that the beneficial effect of these preparations in this disease was due to their antiseptic action.

As long as thirteen years ago I gave, and ever since have given, tincture of iodine internally in chronic rheumatism with gratifying results, especially in cases where iodide of sodium had lost its effect. I am not prepared to give an explanation of the better results obtained by the use of tincture of iodine, nor of the fact that sometimes larger, sometimes smaller, doses of iodide of sodium are better tolerated and of better service. We have certainly a great deal to learn in this direction.

When we ask which of the many preparations of mercury we should employ in any given case, it will be of importance in most cases to consider first in what manner the serum of the tissues shall have to give off chlorine for the purpose of changing the preparation of mercury in question into sublimate and causing the desired transformation in the tissues.

The pure metallic mercury in the form of blue mass or blue ointment requires the whole amount of chlorine, calomel requires much less, and sublimate requires no addition of chlorine from the tissues to induce at once in full power transformations in the system in tissues and their serum. Besides, the different preparations of mercury act differently in taking up chlorine, not only on account of their composition, but essentially, too, on account of the difference in the fineness of their molecules. In this regard those preparations obtained by precipitation excel in comparison with those obtained by the process of melting. Among all the preparations the yellow oxide is the finest. It was on this account that it first was introduced into ophthalmic practice.

We have alluded to the lasting effects of iodoform as compared with tincture of iodine. Among the mercurial preparations it is the yellow oxide which corresponds in this peculiarity with iodoform. To prevent the excellent antiseptic properties of the mercury from being counteracted by direct poisonous effects, we have to select, in many instances, this very preparation on account of its mild and permanent effect.

In former times, especially while the heroic treatment of syphilis was in vogue, the system became slowly poisoned by gradual saturation

with mercury. Now, since solutions of sublimate are among the remedies employed in surgical therapeutics, we have heard of cases of acute poisoning by mercury.* In these accidents there could be traced an intimate relation between the size and the power of absorption of the wound-surfaces on the one hand, and the poisonous effect on the other. For instance, the inner surface of the uterus, with its abundance of blood-vessels, has proved an unsafe place to apply sublimate solutions. It is probable that in cases of rapid saturation of the system with mercury the brain suffers violent changes.

In local application of preparations of mercury it has been observed that the parts surrounding the point of application show more or less severe irritation. Schaffer noticed repeatedly serious effects. Abrasion of surrounding integument was observed by him when precipitate ointment, or sublimate solution, or even calomel had acted upon the integument for some length of time. He saw buboes which had been covered with mercurial ointment or plaster for an exceptionally long period presenting a suspicious-looking decay, having the appearance of diphtheritic-like ulcers. By the too-long-continued action of sublimate on a circumscribed part of the skin necrobiosis of the nearest layers of tissue may be produced. In cases of chronic mercurial poisoning it happens that periodically, especially in the cavity of the mouth, different degrees of irritation or sloughing are noticed on the gums, tonsils, etc. Even more resisting tissues, like bones, suffer essential changes when for a great length of time acted upon by mercury, as in over-saturation of the system with this drug. Recently it has been shown that by the effects of mercury a *displacement* of the lime in the bones may be caused. The old accusation that the so-called tertiary symptoms of syphilis were only those of chronic mercurialism has been proved correct in quite a number of instances.

Of the unfavorable effects of mercury, gingivitis mercurialis is the most known, while the severe affections of the nervous system which take root gradually without being preceded or accompanied by gingivitis have not received as much attention as they merit. Schaffer enumerates among his cases presenting the well-known irritation of the blood-vessels in mercurialism one in which existed different neuralgias and pareses, and, besides, a most alarming reduction of the pulse down to 38 to 34 beats per minute during several days, especially in the morning.

Lately there have been reported cases of surgeons who, though constantly handling for years in clinical practice carbolic acid, iodoform, and mercury, have nevertheless been poisoned by these drugs. Chronic mercurialism is certainly the easiest acquired, and is no doubt one of the most serious affections which we may suffer in following our vocation. It may be that the severe symptoms are relieved by proper medication and good nutrition, but then there remains frequently a peculiar high-graded sensibility of the individual towards mercury, indeed an almost incredibly fine vulnerability, which manifests itself unpleasantly anew on the slightest contact with mercury. We find in such cases nervous derangements to be looked upon as forerunners of psychosis.

On account of these dangers, sublimate should only be employed in cases where the required effects can be secured by very moderate quantities. Where larger quantities are necessary in the treatment of wounds, either in the form of irrigation or for the immersion of masses of dressing material, or other extensive applications, sublimate is the last of all the antiseptics to be chosen.

Sublimate vapor, on the other hand, is, to my understanding, the only reliable disinfectant for dwelling-rooms or hospital wards, and should be preferred to any other in every quarter where cases of contagious diseases have occurred. Professor Koenig, of Göttingen, recently (*Centralbl. f. Chir.*, 1885, No. 12) published his method of fumigation with sublimated vapors, which he has employed for these past twenty years with the most gratifying results. This procedure is also described in the *Medical Record*, September 5, 1885.

In the young history of antiseptic wound-treatment we note already a great deal of fanaticism. We only need to recall the time when it was looked upon as a sort of heresy to think of other wound-treatment than the typical dressing of Lister with its carbolic acid.

Schaffer had occasion to see Lister himself apply an antiseptic dressing on a boy whose right foot had been lacerated by the wheel of a wagon passing over it. The patient had been brought from the street directly into the clinic. Lister's procedure commenced with

* Instances of toxic enteritis caused by the external use of sublimate solution in surgical cases have been reported in *Med. Record*, March 14, 1855, by Dr. Peabody.

the application of carbolic acid solution (1 to 40) by means of a hard brush. The boy gave vent to agonizing cries, and the other patients in the ward followed his outcries by expressions of astonishment and sympathy.

A few months ago, accompanied by a colleague, like myself in search of knowledge of the progress in surgery, I visited one of our dispensaries. One of the patients, an elderly, feeble woman, had had a lacerated finger. The surgeon had removed the last phalanx, and, after trimming the lacerated soft parts, had formed a flap which proved rather short, and had had to be stretched to its utmost capacity in order to be fastened by suture for the purpose of closing the wound. The antiseptic dressing employed consisted of iodoform ointment and sublimate solution (a mixture so much condemned by V. Mosettig-Moorhof). The result was by no means satisfactory.

Both these *fresh* wounds were typical cases for permanent immersion in warm water. Such a permanent bath, in cases of fresh, especially lacerated, wounds of hands, fingers, feet, and even some wounds of the thorax or abdomen, is the most reliable antiseptic. In wounds of the thorax and abdomen the permanent full bath, first introduced by Hebra in the treatment of some extensive skin-diseases, is, as we are aware, tolerated with comfort for any length of time. Everybody knows or should know of what inestimable value a permanent warm-water full bath is in cases of extensive burns. No other antiseptic measure can even be compared with it.

About ten years ago I called the attention of the profession to Sthede's classical treatise, "Ueber Hand und Finger Verletzungen," and published my own experience in the treatment of lacerated hands and fingers by permanent immersion in warm water. Drs. F. H. Hamilton and F. Hyde have occupied themselves most assiduously with this subject; and those who are not familiar with this treatment I wish to refer to the publications of these two esteemed friends of mine.

I think it is fanaticism if the warm-water treatment is altogether disregarded on account of the more fashionable wound-dressing. It is certainly the most commendable antiseptic in cases of fresh wounds of a certain description, especially lacerated wounds and burns.

Five years ago I published a paper on Aluminæ Acetas, the antiseptic which I had employed at that time in the treatment of wounds in preference to carbolic acid. To-day, having become acquainted with many antiseptics for surgical purposes besides carbolic acid, I would still prefer acetate of alum to all others. The history of this antiseptic is a most curious one, and alone will create interest. It illustrates how the greatest merits may be overlooked. In the following I reproduce to some extent my own paper, published, as stated, five years ago:

The exact date does not now occur to me, but it was before the year 1854 that the directors of a sugar refinery in Königsberg, Prussia, asked Dr. Reich, of the same place, to recommend to them a means by which the offensive odor of the putrefying blood used in the process of sugar refining could be overcome. Dr. Reich's experiments led him to suggest the acetate of alumina, which, in small quantities brought in contact with decaying organic matter, not only destroyed in a surprisingly short time all putrefying odors, but also suspended as well as prevented the inauguration of all fermentative processes in fresh animal tissues.

Soon after Reich had made his discovery, Burow experimented with the preparation in order to study its influence on the human system; but since Reich wished to keep secret its use on decaying substances, Burow did not publish his observations. In the year 1857 he first gave an account of them before a medical society of Königsberg.

The acetate of alumina has long been used in the arts on account of its mordant properties, particularly in calico-printing, and also for the purpose of rendering fabrics water-proof. What we know of its chemistry is not very much; but it would seem that a normal acetate of alumina does not exist which would have the constitution of $\left.\begin{matrix}Al_2\\6(C_2H_3O)\end{matrix}\right\}O_6$. The precipitate which we get by the decomposition of the sulphate of alumina with the acetate of lead is probably only a mixture of acetate of alumina, having the chemical formula $\left.\begin{matrix}Al_2\\4(C_2H_3O)\end{matrix}\right\}O_6$, and free acetic acid.

A concentrated solution of acetate of alumina, filtered with excess of acetate of lead, and the lead and sulphur removed, gives by evaporation, without elevating the temperature, an insoluble acetate of alumina, $\left.\begin{matrix}Al_2\\4(C_2H_3O)\end{matrix}\right\}O_6$, in the form of plate-like scales. From the warm solution there is thrown a white powder, which consists of 2

atoms of water and $\left.\begin{matrix}Al_2\\4(C_2H_3O)\end{matrix}\right\}O_6$, and which, digested with 2 atoms of acetate of alumina and 200 parts of water, gives a soluble salt, free acetic acid, and the hydrate of alumina. A solution of acetate of alumina, evaporated rapidly at a low temperature, separates into the acetate of alumina, 2 atoms of acetic acid, and 4 atoms of water. The former, again digested, throws down the hydrate, and has now lost its mordant properties, and can no longer be used in the arts. The hydrate of alumina, dried at a temperature of 100°, and containing two atoms of water, is soluble in acetic acid, insoluble in strong acids.

A solution of the acetate warmed with the sulphate of potash at a temperature of only 30° throws down a gelatinous precipitate, $\left.\begin{matrix}Al_2\\3(SO_3)\end{matrix}\right\}O_6+10$ Aq., which is soluble in cold acetic acid. When dried it is hard, semi-transparent, and easily pulverized. A solution of the acetate and chloride of sodium mixed gives a fine precipitate, composed as follows:

	Per cent.
Al_2O_3	44.66
$C_2H_4O_2$	21.96
HCl	5.51
H_2O	25.90
NCl	1.97

The complicated method of its preparation may have been the reason why the acetate of alumina has not long since attracted more attention among physicians.

Dr. Burow gives the following method for the preparation of the salt:

First, dissolve 10 parts of sulphate of alumina in the least possible quantity of hot water, then 17 parts of crystallized acetate of lead in the same manner, and mix the two solutions while hot; stir well, set aside for a while, and then filter, washing the precipitate, consisting of sulphate of lead, with a little warm water. The clear fluid is now saturated with sulphuretted hydrogen until the odor of the latter is clearly perceptible; then separate with the filter the resulting sulphide of lead, warm until the sulphuretted hydrogen has disappeared, filter again, and dilute the filtrate with sufficient water to make the whole measure 48 parts. We have then in an ounce of the solution a drachm of dehydrated acetate of alumina.

This solution is a clear fluid of a specific gravity of 1.0392, of a sharp, sweetish, astringent taste, and with a distinct odor of acetic acid. Evaporated in the open air, it deposits upon glass or porcelain light, fragile, glassy scales, which are perfectly soluble in water, and not readily affected by the atmosphere.

In external application it is of less importance to have a chemically pure preparation of the salt than one of definite constitution, and whose degree of concentration can be regulated at will. Since the presence of the potassium salt is immaterial, solutions of the acetate of alumina for external use may be prepared from common alum and acetate of lead, 1.6 parts of the latter reducing 1 part of the former; 55 of alum and 31 of acetate of lead are dissolved in cold water, and this process gives an almost complete decomposition of the sulphate of alumina in a nearly concentrated solution.

Externally, Burow first employed the acetate of alumina in cases in which he wished to destroy disagreeable odors,—cases of extensive sloughing and suppuration. Then, after witnessing its beneficial effects on the process of granulation in ulcers of the leg, he tried it for a long time in all cases of the latter character, for the purpose of determining in which it was most useful, and in which it might be contraindicated.

In 1857 he reported seventy cases thus treated. He found the remedy most beneficial in the so-called herpetic ulcers of old writers. In such the abnormal secretions were very quickly arrested, healthy granulations made their appearance, and in cases of many years' standing cicatrization took place within a few weeks.

In varicose ulcers the improvement was also very marked at the beginning; but in almost every case, at a certain point, progress was arrested and remained stationary, and concentrated ointments of the precipitates were substituted.

In simple ulcers of the cellular tissue the results were less marked, perhaps, because the remedy is not sufficiently stimulating in view of the atonic character of the lesion.

As to the different forms of ulcers in general, Burow found that it is particularly the sloughing condition which by a methodical application undergoes the most pronounced change in the shortest time; in such cases the entire suppurating surface must be at first constantly under power to attract and destroy the odors which are developed during this process, and the really miraculous manner in which it regulates perverse secretions in the living organism, are peculiarities which are found in no other drug, and for which, in the present state of our knowledge, we are at a loss to account.

When Burow made his report to the Medical Society of Königsberg he exhibited two cadavers (children), into which he had injected a concentrated solution of acetate of alumina six weeks before; they showed no evidences of putrefaction, and he recommends this mode of embalming.

It was not until the year 1874, when the germ theory was established, that Burow found the explanation which he had so long been seeking; and it was Dr. Beneke, of Königsberg, who demonstrated to him the relation of the acetate of alumina to bacteria and vibriones, and thereby the significance of the remedy as an antiseptic.

Beneke showed that when a drop of the alumina solution was brought in contact with the above organisms, which under the microscope were seen to be in lively action, they were destroyed immediately, with the quickness of lightning.

Having observed this fact, Burow says, "Are we not justified in inquiring whether there exists any antiseptic which can be compared to the acetate of alumina?" And farther on, "Would one imagine it possible that, in spite of my labors in behalf of the remedy so many years, it should not be accepted and introduced into the Pharmacopœia? I repeat again, that for twenty years, during which I have treated all wounds with the acetate of alumina, I have seen no death from pyæmia in my wards, where, in small apartments, there were confined on an average five patients who had undergone operation or presented suppurating wounds."

In Billroth's classical work, "Untersuchungen über die Vegetationsformen von Coccobacteria septica," the remedy is highly recommended. The author says, "I doubt not for a moment that oft-repeated dressings with the alumina solution will secure at least equally as good results as those from carbolic acid; it seems to have gone out of fashion on account of its want of deodorizing power." To this Burow replies, "I am greatly surprised by this remark, since it was precisely the deodorizing power of the remedy that led me to use it for the purpose of destroying the offensive odor of neglected ulcers of the leg."

At the time Burow was still attempting to introduce his remedy, Lister's method came into vogue, and became so popular all over the civilized world that any effort to experiment with anything else was at least regarded as a mere loss of time. The following lines were written by Burow shortly before his death: "It affords me special satisfaction to notice that the fatal influence of the acetate of alumina on bacteria was first published in Billroth's work. I was acquainted with this power of the drug long ago, and I requested my friends among the pathologists to confirm this observation, which was no difficult matter to do. Unfortunately, until the present, I have waited in vain for a response to my request, and to present myself again as a champion of the remedy is painful to me."

The researches of Prof. Paul Bruns, of Tübingen, show that the antifermentative properties of the acetate of alumina had been discovered in the year 1827 by Gannal, who employed it for embalming purposes. In the following we avail ourselves of an article of Prof. Bruns, which appeared in the *Berlin. Klin. Wochenschrift*, 1878, No. 29:

Bruns added to one hundred c.cm. of fresh blood, taken from the ox, fifty c.cm. of the following solutions, and left the mixture exposed in open vessels in a warm room: To the first one hundred c.cm. of blood was added fifty c.cm. of a three per cent. solution of the acetate of alumina, the whole volume thus containing two per cent. of the latter. The mixture soon assumed a dark brown color, having after twenty-four hours the consistency of syrup, and after forty-eight hours of a fluid extract. The mass did not exhibit the slightest changes at the expiration of weeks, or even months, and after this long period of exposure there was no trace of any putrefactive odor, or of the presence of bacteria; this proves that even two per cent. solutions of the salt are sufficient to protect permanently from decomposition organic substances which readily undergo that process.

To the second one hundred c.cm. of blood Bruns added a one per cent. solution of acetate of alumina, the entire mixture containing 0.66 per cent. of the salt, and there was no development of bacteria for fourteen days, and not until the third week could any be found.

To the third one hundred c.cm. of blood a 0.5 per cent. solution of the alumina was added, the whole containing 0.33 per cent. of the latter, and gradual decomposition took place during the second week. For the purposes of comparison, two more portions were mixed with fifty c.cm. of a thymol solution (one to one thousand), and the same quantity of a solution of salicylic acid (one to three hundred); both mixtures already at the end of twenty-four hours exhibited a distinct odor of putrefaction and an abundant development of bacteria.

In another series of experiments there were

taken each time fifty grm. of fresh beef, which were placed in an open vessel, and in each case a solution of the acetate of alumina of varying strength added, and the whole kept freely exposed to the atmosphere of a warm room. The sample of fifty grm. of beef treated with four hundred c.cm. of a three per cent. solution of the salt was found after five months to be absolutely unaltered; the solution of acetate of alumina remained perfectly clear without a trace of turbidity or putrefactive odor, and the muscular structure, as shown by microscopic examination, retained its normal character. Two other samples, the one treated with a thymol solution (one to one thousand) and the other with a salicylic acid (one to three hundred), were found already on the fifth and tenth days respectively to be turbid and offensive, and became rapidly and completely decomposed. Bruns, who thus demonstrates conclusively the powerful antiseptic properties of the acetate of alumina, observes that it was far from being as well known as it deserved.

I first employed acetate of alum in 1875, when I was called to a patient in whom the lower third of the leg had been amputated for gangrene of the foot. It appears that the operation had been performed before the line of demarcation had formed, and I found a gangrenous stump, with the bone protruding, closely enveloped in adhesive plaster.

The odor that was developed was terrible, but the moment I applied a solution of the acetate of alumina it disappeared like magic, and did not return. I kept the gangrenous parts saturated with the solution, and as soon as the line of demarcation had formed I resected the stump, and, continuing the above application, the patient made a rapid recovery, the amputation-wound healing by primary intention.

In the same year I had occasion to try the superior antiseptic power of the preparation in a case of compound comminuted fracture of the tibia and fibula, caused by a kick from a horse. I at once had to remove several large and small fragments of bone. During several months following numerous sequestra were also removed, and the wounds were kept in an aseptic condition all through by acetate of alum solution. Sufficient periosteum had remained intact for the formation of new bone, and the patient recovered with a very useful leg.

V. Bruns, of Tübingen, gives the following formula for a three per cent. solution, the strongest which is required:

℞ Alum, 72 parts;
Plumbi acet., 115 parts;
Aquæ, 1000 parts.
M. et filtra.

For the purpose of irrigation this three per cent. solution may be diluted by from three to six volumes of water, giving a one per cent. to 0.5 per cent. solution.

In vain I looked over the lists given by Koch in the *Mittheilungen aus dem Reichs Gesundheitsamt* of the germicidal power of the different antiseptics. Acetate of alum was not mentioned.

This is as strange as is the history of the drug above given.

The germicidal power of this salt must be near or equal that of a strong solution of corrosive sublimate. It is certainly superior to most other antiseptics in this regard, and superior to all on account of being non-poisonous.

I only know one drawback to its use, that is its price. In this regard it is to be hoped that some of our chemists might discover a cheaper mode of preparation. This high price is the only reason I can conceive of why it is only used in some of the German clinics and not in all.

My publication was noticed by the late Marion Sims, who wrote me an emphatic letter on the merits of the drug, which, on my recommendation, he had used extensively in gynæcological practice.

I need not add how much preferable it is for post-partum injections to carbolic acid, the latter being too strongly irritant, and, as we have seen, less effective as an antiseptic.

Where for internal medication sublimate is selected, the choice is not always the best. For internal use the most minute doses have to be administered of a preparation of mercury which has a mild and permanent effect. The mercurialization has to act as a perfect disinfective for a certain length of time. When new mercurial preparations are recommended as being absorbed with especial facility, we have to regard such readiness as a warning not to prescribe such preparations, as it is too easy to overstep, in administering the same, the therapeutical boundaries.

The yellow oxide of mercury, on account of its mild effect and slow decomposition, is the best adapted for internal medication.

According to Schaffer, under the influence of yellow oxide of mercury the different forms of angina and the pathological processes in the cavity of the mouth disappear in the simplest manner and promptly, with-

out the patient being bothered by gargling, snuffing, and like procedures. Schaffer applied his yellow powder (hydrargyri oxidi flavi 1, sacch. 1000) in diphtheritic affections of the cavity of the mouth or pharynx, spreading a point-of-a-knifeful on the root of the tongue every hour. By this means he succeeded in reducing fever and obtained most decided local antiseptic effect. Sometimes he combined this local application with the internal administration of small doses of iodide of sodium.

It is well known that a greater antiseptic effect will be obtained in certain forms of disease if mercury and preparations of iodine combined act upon the system. These two drugs by their combination in *statu nascenti* develop a decidedly higher curative influence on the pathological changes. In their combination we have the great advantage of requiring smaller quantities of each of the two remedies. Another advantage is that the preparations of iodine contribute to the speedy elimination of the mercury. On the other hand, the peculiar effect of the combination of mercury and iodine may give rise to accidents if not guarded against by careful selection of preparations and doses. E. Baumeister (*Berliner Klin. Wochenschr.*, October 27, 1884, "Ueber gleichzeitiger Anwendung von Calomel und Iodkali") has published a case of this kind. The patient had a syphilitic affection of the eye, and was ordered to dust calomel into the eye at night. Previously, for eruptions on the forehead, he was ordered iodide of potassium, which he still was taking. He applied the calomel in the manner described. This combination had a most serious effect. During the night, after he had dusted his eye with calomel, he awoke with a most violent pain,—"the eye seemed to protrude out of its socket." Dr. Baumeister, who was called at once, gives a detailed ophthalmological account of the appearance of the eye. It was as if the eye had been injured by some caustic liquid.

Since the introduction of calomel in ophthalmologic practice as a topical remedy, the danger of its application while iodide of potassium is given internally has been recognized at an early period, but has, later on, been overlooked. Again, iodine is not even mentioned in any of the text-books on ophthalmology. It may cause destruction of the eye in severe cases, and in others the symptoms may not be referred to their proper cause. Schlaefke, by experimenting on animals, endeavored to explain this action of calomel and iodide of potassium combined. Shortly after the administration of iodide of potassium he found iodine in the lachrymal liquid, in the conjunctival sac. If now calomel was dusted into the eye the combination was protoiodide of mercury, biniodide of mercury salt, a combination of double salts, soluble and strongly caustic.

Schaffer observed in some patients who took the yellow oxide of mercury certain accompanying effects on the lungs. Such patients commenced to cough with greater ease, and Schaffer took advantage of this effect in the treatment of bronchial catarrhs, especially in inveterate cases accompanied by malnutrition. Indeed, this treatment with this preparation appears very simple when compared with certain medication, as inhalations, which interferes with digestion. Careful mercurialization is especially well adapted to the treatment of cases of hæmoptoë, or blood-coagula, which, wherever in the system they may be found, offer a most favorable chance for the development of micro-organisms.

A guide for the judicious medication with mercury is the early appearance of a peculiar irritation of the larynx, probably caused by the effect of the mercury on the ciliated epithelium. The observation of gingivitis in its initial stage offers too little security for proper distinction. Another effect of the internal application of yellow oxide of mercury is the improvement of digestion and nutrition, of which we have spoken already in the paper on dyspepsia septica.

The yellow oxide of mercury should be the indispensable remedy in typhoid fever.

Very gratifying collateral effects of this preparation on the uro-genital apparatus have been observed. Very soon, and sometimes twenty-four hours after administration, mercury can be found in the urine. In passing the kidneys, the bladder, the urethra, it acts as an antiseptic on pathological conditions of these organs.

Schaffer ordered 2 to 3 centigrammes ($\frac{3}{10}$ to $\frac{4}{10}$ grain) daily of the yellow oxide of mercury in a case of Bright's disease, with a view of improving the malnutrition. After ten days he noticed not only decided improvement in regard to the general condition of the patient, but also a great reduction of the amount of albumen in the urine. He also saw plainly the beneficial effect of this medication in a case of floating kidney with pyelonephritis.

He had a most marked and gratifying result of this medication in seven cases of ulcerative catarrh of the bladder. In two of these cases

hæmaturia was present, and in one of these two hæmaturia had persisted for weeks. He gave 2, 3, 4 centigrammes ($\frac{3}{10}$ to $\frac{1}{2}$ grain) daily, and noticed after three or four days decided improvement in the sediments, and after five days there was no more blood voided. Even in the severe case mentioned complete recovery took place after fourteen days; the urine had assumed a light wine-yellow color, and did not change again.

If Schaffer's treatment of this sensitive organ proves reliable, a great advantage will be gained over other methods of antisepsis of the bladder. The former can be carried out much easier than irrigation, especially in cases where the catheterization already is a most painful and serious procedure.

As we have mentioned already, the lasting effect of antiseptics, which is especially required if we are dealing with large wound-surfaces, has not always been considered in the selection of antiseptics.

Since sublimate is regarded as nearly the only preparation of mercury for surgical antiseptis, Lister, in order to give it a more lasting and at same time milder effect, has in his experiments combined sublimate with the serum of the blood. Lister has proposed to apply sero-sublimate ointment (sero-sublimate with vaseline); but it would be much more simple and rational to employ instead the excellent yellow ophthalmic salve, composed of yellow oxide of mercury in the strength of one-half to two or more per cent. Schaffer employed this salve in surgery as early as 1874.

Other preparations of mercury may be equally serviceable for antiseptic purposes if only their solubility and capacity of transformation were known and considered in each case for which any of the different preparations is selected.

As soon as we understand the effect of certain ointments, be it Lister's sero-sublimate or the ophthalmic, as antiseptics in surgery in general, we will be enabled in certain cases and under certain conditions to simplify the antiseptic dressing.

I have employed the ophthalmic salve in cases of erysipelas. The results were good, but I am not yet prepared to publish my experience in this direction.

CARBOHYDRATE AND FATTY FOODS.

By N. A. Randolph, M.D., Philadelphia.

UNDER the general heading of Fats is recognized a certain group of bodies composed of carbon, hydrogen, and oxygen, which are capable of saponification and of emulsification, and which are insoluble in water. The true or neutral fats belong to one of three groups: stearine, palmitine, and oleine; margarine being usually accounted a combination of the first and third. Chemically, each of these bodies is analogous in composition to any of the neutral salts. In the fats, however, the acid radical is represented by a fatty acid, and the base by glycerin. Thus, stearine may be regarded as the union of stearic acid with glycerin, and palmitine and oleine as respectively a palmitate and an oleate of glycerin. The fatty acid is, however, by far the preponderant portion of the molecule, the glycerin never exceeding from eight to ten per cent. of the substance. The fats named have been mentioned in the order of their solidity at ordinary temperatures, stearine being hard and oleine entirely fluid under usual conditions, while palmatine occupies an intermediate position in regard to density. As foods these bodies are of extreme importance, though their full value has not been appreciated until a comparatively recent period, because, when taken to the exclusion of other foods, continued nutrition becomes impossible.

We eat fat in a nearly pure state in lard, in oils, and in butter. It exists in varying amount in every organic food. Thus we find in

Meats, five to ten per cent.
Eggs, twelve per cent.
Milk, three to four per cent.
Butter, eighty to ninety per cent.
Cheese, from eight to thirty per cent.
Almonds and nuts in general, fifty-three to sixty-six per cent.

And in all vegetables, from traces to two and three per cent.

Fat is an integral constituent of the higher animals, being entirely absent only in the lowest. It is found not simply in great reservoirs of the subcutaneous connective tissues, in the omentum, and around the kidneys, but also, finely divided and invisible to the naked eye, in every organ and fluid of the body. Its subdivision is so minute, and its distribution so wide, that especially for muscular tissue it has been well described as

being "amalgamated" with the tissue. The chemical composition of fats of different animals is comparatively constant. The mean of eight analyses, including the fat of the ox, sheep, pig, dog, man, cat, horse, and butter, revealed an average constitution of $C_{76.5}H_{11.9}O_{11.6}$, while in the separate analyses these figures differ scarcely one per cent. from one another. Curiously enough, however, the difference in the chemical constitution of the fats of different animals gives to these animals their characteristic odors.

Just as in the body as a whole we find an inverse ratio between its fatty and watery constituents, so in the fatty tissues proper we find a similar relationship. This is strictly correlated with the histogenesis of adipose tissue,—*i.e.*, the fat-globules are produced in the connective-tissue corpuscle at the expense of the contained watery protoplasm. From figures gained by actual analyses, it may be stated that in the average healthy adult the fat equals eighteen per cent. of the entire body-weight, or forty-four per cent. of the weight of the dried body.

The extremes in the proportion of fat in the body coincident, apparently, with health have been most carefully studied in the domestic animals. Thus, in sheep of different degrees of fatness the following percentage relations in their proximate composition have been found to obtain :

	Per cent. Water.	Per cent. Albumen.	Per cent. Fat.	Per cent. Ash.
Thin sheep.....	57.3	18 4	18.7	3.16
Moderately fat sheep.....	50.2	14.0	23.5	3.17
Fat sheep.....	43.4	12.2	35.6	2.81
Very fat sheep.....	35.2	10.9	45.8	2.90

In order to appreciate the importance of fats in the economy we must turn to the phenomena occurring as a result of abstinence from food. In this condition there is constant disintegration of albumen and fat, the destruction in the latter case being twice as great as in the former. To prevent further loss of fat, either albumen, fat, or carbohydrates must be given.

That by its metabolic activity the body can make fat out of other than fatty substances is fully established. A cow subsisting on hay alone accumulates and secretes many times as much fat as she takes in her food. A woman in lactation also secretes much more fat than is ingested. In the process of fattening pigs it has been shown by direct analysis at the end of the experiment that for every one hundred parts of fat in the food consumed four hundred and seventy-two parts of fat are stored up in the body. Perhaps the most striking illustration of metabolic fat production is found in the experiments conducted by Hoffmann on a maggot's eggs. The fat percentage in a given weight of these eggs was determined, and a corresponding quantity were allowed to develop in defibrinated blood. When the maggots became mature, it was found that the fat in the eggs from which they were developed, plus the fat in their food, constituted a little less than one-tenth of the fat extracted from their bodies. Here the fat production could be attributed only to separation of albuminoids into other nitrogenous matters and fats.

Pathologically, we frequently see a retrograde metamorphosis of albumen, which constitutes fatty degeneration. Somewhat similar in nature is the post-mortem production of adipocere, in which the proteids of the body have been broken up, possibly by bacterial agency, with the production of the higher fatty acids. The bodies last named unite with earthy and ammoniacal bases to form an insoluble soap, which replaces and assumes the form of the destroyed tissues. As a result of poisoning, especially by phosphorus, there is also noted a similar production of fat resulting from the decomposition of albumen.

Admitting now that fat may be made in the body from albumens, it becomes interesting to note the amount of albumen requisite in the otherwise starving animal to prevent for a time any loss of fat. This quantity is large, and is in inverse ratio to the amount of fat already in the body. In very meagre individuals it would be impossible to prevent loss of fat under these circumstances, as the requisite amount of albumen would be more than could be digested. By the addition, however, of a small quantity of fat to the albumen a much smaller quantity of the latter is sufficient to prevent decrease either of the albuminous or of the fatty tissues. As we shall see in studying the history of the proteids of the economy, the most rapid destruction of these compounds takes place not in the formed tissues, as was formerly supposed, but in the circulating fluids. Close chemical studies have shown that when fats are present in company with the circulating albumens they greatly retard the destruction of the latter. In other words, the functionally active cell in any part of the body is

bathed in a fluid containing both proteid matter and fat. Only a portion of the force of that active cell is derived from the disintegration of the albuminoid, the remainder being gained from the destruction of the fat. It is especially under muscular activity that the destruction of the fats is most marked, and for this reason they form a most important element in the dietary of the laboring classes. This power of fats to prevent the destruction of the albumens of the body is illustrated by the fact that a moderately fat individual will resist starvation for a longer period than will one of equal muscularity but greater specific gravity. Nevertheless, fat alone is a very insufficient food. It retards the destruction of the albumens, and therefore prolongs, though it cannot sustain life. Thus, Magendie fed two dogs, one on butter, the other on lard, without other food. The first lived sixty-eight days, the other fifty-six. The post-mortem examination showed an accumulation of subcutaneous fat, but general atrophy of the organs. Rats, also, which in the absence of all food starve in from three to nine days, will live upon fat for from twenty-six to twenty-nine days.

Under normal conditions the fats ingested are absorbed with remarkable completeness and in surprising quantity. Thus, in a dog of nearly eighty pounds weight, to which was given in one day eleven ounces of fat in conjunction with other food, a little less than a drachm of fat could be obtained from the fæces. The maximum limit of fat-absorption is not yet established, but it is doubtful whether the amount last mentioned could be absorbed during many successive days. On the contrary, it is highly probable that a degree of saturation of the circulating fluids would be obtained beyond which further absorption would not occur. Experiments instituted by the writer (aided by Dr. Roussel) upon twenty healthy individuals (both infants and adults) with a view of determining the question of the cutaneous absorption of fats gave the following results:

At the beginning of the experiments the fæces were, in each case, found to be practically free from fat. After continued inunction of cod-liver oil, applied twice daily for a period of two weeks, there was found not only a gain in weight of the individuals (with whom the general dietary had been unchanged), but a notable quantity of fat present in the alvine dejections. This could only be attributed to a kind of saturation of the fluids of the body, which as a result prevented further absorption of fat from the intestinal surface, the fat found in the dejections corresponding, therefore, to unabsorbed fat taken in the food. This supposition is strengthened by the observations of Berthe, who showed that pure cod-liver oil, given internally, could be taken for a longer time without appearing in the fæces, than could an equal amount of butter or any of the other animal and vegetable fats.

When we remember that the absorption of ingested fats is, in all probability, a result of the purely vital activity of the protoplasm of the intestinal epithelium, it is not difficult to understand the rejection of a needless aliment by this absorbent surface. It is a manifestation of protoplasmic selective power analogous to that exhibited by two dissimilar plants drawing from the same earth each its distinct and special pabulum. Such intestinal selection is illustrated by the behavior of petrolatum (cosmoline, vaseline) in the digestive tract. This substance, while non-saponifiable and chemically distinct from the fats, presents many points of physical resemblance. Prompted by this resemblance, the query arose in my mind, a few months ago, as to the possible absorption of this soft hydrocarbon by the human digestive tract and its subsequent oxidation in the tissues,—in other words, whether it could or could not be utilized as a food. On each of eight days I swallowed half an ounce of commercial vaseline, and caused my laboratory assistant to do the same. Digestion was not disturbed in either case, and no noticeable effects ensued. Later, to each of two healthy adults there was given, in the course of forty-eight hours, one ounce of vaseline. Their fæces for three days from the beginning of this experiment were collected, dried, and extracted with petroleum ether. From the extract the vaseline ingested was entirely recovered,—evidence of its complete rejection by the intestinal surface. In further experiments upon various acquaintances I have found that petrolatum, administered internally, is often sufficient to check rather severe diarrhœas of irritation, apparently acting simply as a mechanical lubricant, which exerts its soothing effect upon the entire irritated surface. It is a curious fact that petrolatum is also efficient in removing constipation, its action being, of course, that of an unabsorbable diluent of the intestinal contents. The amount requisite to produce the desired result is in this case, however, too large to render the method one of any general usefulness.

In abnormal conditions, such as mechanically obstructed or otherwise impaired biliary or pancreatic secretion, or from diminished activity (from any cause) of the intestinal epithelium, fatty stools are noted. In health, however, fat is found in but minimal amounts in the excreta, although other unabsorbed food-elements—bits of muscle-fibre, starch, etc.—are readily found. Curiously enough, the presence in the intestinal contents of bran, woody fibre, and the like, which material impede the proper digestion and absorption of the proteid foods, have little or no effect upon the practically complete absorption of fats. Rubner has shown that the human intestine can absorb large quantities of fat,—much larger, indeed, than in the case of the dog just cited; but the length of time during which such absorption could be continued was not determined. In comparison with ham-fat, he found butter to be by far the more readily absorbed. Previous accurate observations already cited have shown that cod-liver oil is absorbed with greater ease and to a greater degree than any of the other fats. The vegetable oils, on the other hand, are the least readily absorbed.

In every sound nutritive schema we find that the fats occupy a prominent position. It is very significant, in this connection, to note that in the first food of the mammal the fats and albumens are present in practically equal parts. It, of course, goes without saying that a fat which is not entirely fluid at the temperature of the viscera is with difficulty susceptible of emulsification and absorption, and may prove an irritant to weak digestive organs. Although the fats of high melting-point contain olein, which is fluid at ordinary temperatures, there is also present sufficient stearin to render a higher temperature requisite for melting the mixture. Thus, the melting-point for the fat of mutton is from 41° to 52° C.; for beef, 41° to 50° C.; for pork-fat, 42° to 48° C.; whereas the fat of the horse, rabbit, and goose is fluid at from 24° to 30° C. These facts suggest the cause of the wide-spread preference for fats which, in popular phrase, "melt in the mouth."

When digestion and absorption are imperfect, fats may become irritants by undergoing a decomposition which exceeds physiological bounds, with the production of volatile and irritant fatty acids possessing characteristic rancid odors. Somewhat similar decompositions occur at the temperature requisite for frying. This we must regard as one factor in the frequent cases of indigestion of fried foods, and a further reason that the fats, especially when cooked with other foods, are frequently found to be unwholesome is that in the process of cooking they so surround and saturate the tissues of the substance with which they are combined that it is rendered nearly inaccessible to the action of the saliva and gastric juice, and at times digestion is in so far delayed that the fried substance does not become entirely freed from this more or less impervious coating of fat until subjected to the action of the pancreatic juice.

Under ordinary circumstances the fatty acids of the neutral fats are not taken into the economy as such, but in combination with a small amount of glycerin. The fatty acids, however, alone are fully capable of replacing the neutral fats as a food. When administered to a dog in the form of soaps, in conjunction with meat from which all fat had been removed, Munk found that the animal gained in weight in precisely the same way that it would have done had the acid been given in its more usual combination. No nutritive value, strictly speaking, has as yet been determined for the glycerin found in fats, but it is believed that in the form of glycero-phosphoric acid it carries phosphoric acid to the tissues where the latter acid is needed. It is quite well established that the lecithins are direct derivatives of glycero-phosphoric acid.

A carbohydrate is a compound of carbon, hydrogen, and oxygen, in which the elements last named are in the proportion requisite for the formation of water. The carbohydrates of the economy and of its foods may be grouped in four classes.

The first includes the glucoses, which possess the formula $C_6H_{12}O_6$. The word glucose may be used as synonymous with grape-sugar, dextrose, starch-sugar, and liver-sugar. Glucose is constantly found, in minute quantity, in blood, chyle, and muscle. An excess above the small maximum normal to these tissues is immediately rejected and excreted; thus, a solution of glucose injected into a vein at once makes its appearance in the urine, and the glycosuria of diabetes mellitus is attributed to a nervous disturbance of the hepatic function, which permits the entrance into the circulating fluids of a greater amount of this substance than is normal.

In the vegetable kingdom glucose is widespread, being found in the sweet juices of ripe fruits and in the honey of flowers. It is physiologically produced in germinating seeds by the action of the amylolytic ferment therein con-

tained. It is crystallizable, combines feebly with bases, salts, acids, and alcohols, and has a reducing action on many metallic oxides. By fermentation with yeast it separates into alcohol and carbonic acid, and in the presence of decomposing albumen it splits into two molecules of lactic acid, which, in alkaline solutions under the same conditions, may be yet further decomposed into butyric and carbonic acids and hydrogen. To this group belongs also galactose, produced by the action of diluted acid upon sugar of milk, and levulose, an isomeric body, which, however, rotates the ray of polarized light to the left. It is a by-product in the intestinal digestion of starches.

The second division of the carbohydrates contains those of the formula $C_{12}H_{22}O_{11}$, commonly called the saccharoses. They may be regarded as anhydrides of the double glucose molecule. Their physiological type is lactose, or milk-sugar, and their type, from a dietetic point of view, is cane- or beet-sugar. Lactose is capable of change by direct fermentation into lactic acid, and indirectly by yeast into alcohol, as in the production of koumiss. Cane-sugar is in some degree at least transformed into glucose before it is absorbed.

The third group includes the carbohydrates of the formula $C_6H_{10}O_5$,—*i.e.*, starches, dextrin, cellulose, gums, and glycogen. One of the most striking differences between the green plants and all animals lies in the power possessed by the former of manufacturing starch from inorganic substances. The chlorophyll of the green plant, when stimulated by sunlight, can induce the union of six molecules of atmospheric carbon dinoxide with five molecules of water, with the resultant production of one molecule of starch and the liberation of oxygen. No such synthetic power is possessed by any animal, and for the manufacture of a carbohydrate in the animal there is requisite, therefore, either a pre-existing carbohydrate or the destruction of an albuminoid. Starch in its raw state is entirely insoluble in water. When boiled, the granulose, which constitutes the major portion of the starch-grain, and which is contained within an enveloping membrane of cellulose, becomes swollen and ruptures the membrane, with the production of the common starch-jelly or paste. Such mechanical hydration of the starch-granule is very essential to its digestibility, as the cellulose envelope is little, if at all, affected by the saliva. The pancreatic juice, however, is fairly useful in dissolving even raw starch. Starch frequently causes indigestion when eaten in large quantities from the following causes:

First. — Glucose may be formed more quickly than it can be absorbed, and by its presence retard the further digestion of the starch.

Second.—Starch, when long retained, is liable to fermentation, with the evolution of butyric acid, thus causing persistent diarrhœas, especially in early childhood.

Much diversity of opinion exists as to the digestion of starches in infancy. I have settled this point to my own satisfaction by the microscopic examination of the fæces of twenty-four starch-fed infants, aged from 45 days to 18 months.

The results of this study will be found in the table on the following page:

It should be observed that the word "traces," applied to the presence of starch in the fæces, does not indicate inefficiency of starch-digestion. Similar traces of starch are found in the fæces of nearly every healthy adult upon a mixed diet.

It may legitimately be deduced from this study that in *many* cases starch is well digested in early infancy, that the individual variations in this regard are too numerous to permit any sweeping statement, and that the physician may assure himself as to the peculiarities of the case in hand only by a direct examination of the dejecta.

If an infant cannot digest starch, it is self-evident that starch is worse than useless as an ingredient in its food. The converse of this does not obtain; the mere fact that a given infant can digest a certain quantity of a farinaceous material is in itself no proof that such material is a useful ingredient in the dietary of that infant. The ratios existing in human milk between carbohydrate, fat, and proteid cannot with safety be greatly altered in an artificial food for early infant life.

Dextrin is prepared by superheating dry starch, and is also found as an intermediate product in the action of dilute acids and of digestive juices upon starch. It is chemically isomeric with the starch, but presents certain physical differences from this body, being soluble in water, and also much more tenacious as a mucilage. Dextrin is probably absorbed to some degree unchanged from the digestive cavities, inasmuch as there is found in the blood of the portal vein during digestion a substance which gives the characteristic reactions, and possesses the general properties of dextrin.

Cellulose is found inseparably associated

No.	Name.	Age.	Food.	Starch present.	Remarks.
1	Savin.....	45 days.	Condensed milk and cracker-dust.	None.	
2	Jocker.....	2 mos.	"	Traces.	
3	McGettinger.....	2+ "	"	"	
4	McGowan.....	3 "	"	"	Twice examined: no fat before inunction, about 10 per cent. after.
5	Ross.....	3 "	"	"	
6	Hays	3 "	"	About ¼ starch.	
7	Soy.....	3 "	"	Traces.	
8	Henwich	4 "	Corn-starch and milk.	"	
9	Moore	4 "	Condensed milk and cracker-dust.	None.	Many broken cellulose envelopes.
10	Conway.....	4+ "	"	Traces.	Evidences of potato surreptitiously given.
11	Roach	5 "	"	About ½ starch.	
12	Anxier.....	5+ "	"	None.	
13	Schmitz.....	5+ "	"	"	Many bacteria.
14	McKinley.....	6+ "	"	"	10 per cent. fat; had had inunctions.
15	Hall.....	8+ "	Breast and cracker-food.	Traces.	
16	Henson	10+ "	Condensed milk and cracker-dust.	More than normal.	Many bacteria; evidences of potato surreptitiously given.
17	Devine.....	13— "	"	20 to 30 per ct.	Some glucose present, and indications of dextrin; saliva was found to be inefficient.
18	Croncia	14— "	"	Traces.	
19	Madden.....	14 "	"	"	
20	Boyle	14 "	"	10 per ct. starch.	Sick.
21	Glass	14+ "	"	None.	Except a few large cells containing starch from potato.
22	Kinscher.....	17— "	"	"	
23	Wood.....	17— "	"	Over ¼ starch.	Syphilitic; saliva was found to be inefficient.
24	Dane	18 "	"	Traces.	Indications of dextrin.

with the formed tissues of the vegetable kingdom, being one of the chief constituents of the vegetable cell-wall. Its digestibility depends largely upon its age, and upon the extent to which it has been cooked. When young and tender, as in celery, asparagus, and salads, about one-half of its substance is digested, the remainder being of service in giving the proper bulk and consistence to the intestinal contents. This it does, however, at the expense of the complete absorption of the proteid food-stuffs.

As is the case with other carbohydrates, gums possess no permanent nutritive value. Many authors claim that they are entirely unaffected by the digestive processes, but later studies have shown that they are absorbed to the extent of from forty to fifty per cent.

Glycogen, besides being a normal constituent of the human economy, is found in many foods. It is always present in the normal liver in varying amounts, the maximum being obtained in the livers of cattle upon a vegetable diet, where it forms from fourteen to seventeen per cent. of the entire liver-substance. It is further found in muscle, in most embryonal tissues, and, according to Pavy, also in the spleen, pancreas, eggs, brain, and blood. It is present in considerable amount in the large livers of oysters and other mollusks.

The fourth division contains but one member, viz., inosite. This is a sweetish sugar, isomeric with glucose, but entirely incapable of other fermentation than the sarcolactic. It is variously known as muscle-sugar, bean-sugar, and phaseomannite. It exists normally in muscle, where it is decomposed by each muscular contraction, with the resultant production of saracolactic acid. It has also been found in lung, liver, spleen, kidney, and brain of oxen. It exists normally in the human kidney and pathologically in the urine. It is found in all the leguminosæ, and also in grape-juice.

We have seen that there are present in the tissues of the body both fats and carbohydrates. The origin of the various carbohydrates is, in greater part at least, directly or indirectly from similar carbohydrates taken as food. Thus, for instance, the glycogen of the liver greatly diminishes in amount in the absence of carbohydrate food-stuffs. This is not the case with the fats. Foods containing starch

and sugar are well known to be fattening. The explanation of this would at first sight seem to be that fat is made out of these bodies by the metabolic activity of the tissues. This explanation, however, is not correct. The true cause of the increase of body-fat upon a mixed diet containing an excess of carbohydrates lies simply in the fact that these bodies become oxidized in the place of the albumens, thereby sparing the latter to fulfil their nutritive and other functions, and finally to produce fat. The ingested fats aid in the production of fat in the economy, both in this indirect manner and also directly replacing fats already oxidized and disintegrated.

It will be seen from this brief statement that in a mixed diet containing inorganic foods, proteids, fats, and carbohydrates, the two bodies last named are capable of replacing one another to a large extent, for their functions are practically the same,—*i.e.*, each sacrifices itself in the oxidation-flame of life for the sake of the more valuable proteid tissues and fluids. This is most marked in the case of the carbohydrates, which are able almost entirely to replace the fats in a dietary. Under these circumstances, however, there is found to be a considerable tax upon the metabolic activity of the tissues in manufacturing the fats. In like manner animals fed exclusively on meat will manufacture from their own tissues the needed carbohydrates in much greater quantity than that in which they exist in the food taken. But here again comes a strain on tissue metabolism, and practically it is found that, other things being equal, it is best to have both the carbohydrates and fats present in the food.

Thus far we have considered similarity in the two groups of organic non-nitrogenous foods. There are, however, certain differences. Thus, a given weight of fat represents one and three-fourth times the nutritive value of the same weight of sugar or starch. Although both of these bodies are heat-producers, the fats again have the advantage, and it is for this reason that they assume such high nutritive importance in cold countries and are consumed by us to a much greater extent in winter than in summer.

The direct bearing which these facts have upon the subject of corpulence is evident. The man who is fat does not of necessity partake too freely of starch and sugar or of oils. He is simply a man who eats too much. His powers of digestion, absorption, and especially of assimilation, are usually far superior to those of his thin neighbor, who may, and often does, eat far more than his obese friend. The plump patient, therefore, must not console himself with his relative temperance in food. He stands perpetually self-convicted as a man who consumes more nutriment than is needed to repair his daily wear and tear. So active are the nutritive processes in his body that he can say with poor Byron, "Everything I eat turns to tallow and sticks to my ribs." He can, of course, reduce his fat by abstinence from carbohydrates and fats, but in so doing he not only violates his nature by turning carnivore, and seriously taxes his emunctories in eliminating an excess of nitrogenous waste, but he needlessly alienates too much tissue-force by the tax and strain of excessive metabolic activity. To permanently and harmlessly reduce his bulk it is necessary simply to very gradually reduce the daily total of his aggregate mixed diet. The popular belief that the ingestion of much fluid is fattening probably arises from observations of the use of fluids other than water.

Given the same degree of obedience on the part of a fat and of a thin patient, it is generally much easier to reduce the former than to fatten the latter. In the first case it is purely a question of abstemiousness. In the second, the simple administration of food in excess of the bodily needs, if unaided by a corresponding stimulation of the assimilating powers, is not infrequently worse than useless. Such a nutritive stimulus may be obtained by the conjoint use of enforced rest, passive exercise by massage and electricity, and a dietary gradually increasing in bulk and variety, the chief factor in which is milk.

For the details of this latter process I would refer the reader to that gem of medical monographs, Mitchell's "Fat and Blood."

132 PRICE STREET, GERMANTOWN.

POINTS IN THE TREATMENT OF ASTHMA.

BY E. CHENERY, M.D., BOSTON, MASS.

IT seems to me that Dr. J. Milner Fothergill makes important omissions in the treatment of asthma, as published in the New York *Medical Record*. He suggests that we first take time to differentiate the case, and refer it to its proper class. Now it may be we have not time to do this, and we have to act on the

spur of the moment. Such a case fell into my hands a while since, in which the patient was so bad that she has no remembrance of my first visit. Here amyl nitrite and a hypodermic of morphine and atropine saved my patient, after which I had time to turn around and classify the case. Both these prompt and potent remedies have been omitted from Dr. Fothergill's category for immediate relief. Chloroform, which I lately successfully used, is not mentioned by him. In mild attacks an empirical powder of nitre and stramonium, burned under the nose, often proves serviceable, but will often also fail; then the chloroform, or, in extreme cases, the above remedies, are our confidence.

For hay-asthma the only suggestion is the avoidance of the pollen of certain plants. Where is cocaine and the inhalation of vapors containing soothing and antimicrobic remedies? Everybody cannot leave home when they list, hence they cannot escape the presence of the cause. I wonder why it is that the mould-germs in our basements, contaminating the air we breathe, have not been impeached in this respect? Instead of going out of the heart of a densely-crowded city, where the pollen of hay is not within a hundred miles, it has never occurred to let loose the vapor of iodine, ozone, or some other powerful mould-destroyer in the basement of our houses, and by that means render the premises fit for the abode of such patients. While some may be affected by the pollen of certain known species of vegetation, I have the strong belief that the cause often lies close at home, even beneath our feet, in our close, damp, sunless cellars; and I am persuaded that medicine to the house is often more fitting to the case than medicine to the man.

I do not have asthma myself, but when there is any sweeping to be done in the house I must leave. Carpet-dust, though it does not stop up my lungs, is sufficiently irritating to cause acute coryza, to say nothing of parts lower down. What may cause coryza in me may cause bronchitis or asthma in another. I have gotten rid of carpet-dust in some parts of my house, especially those which I occupy, by getting rid of the carpets, and getting in their place hard, polished floors.

In cases of asthma from bronchitis, Dr. Fothergill does not mention one of our best remedies, the iodide of potassium, freely and protractedly given, nor the nascent chloride of ammonium.

As many cases depend upon digestive troubles by reflection to the pulmonary branch of the pneumogastric, the conditions of the stomach are to be carefully scrutinized. Some cases, also, are reflected from the uterus, which permanently disappear on removal of the remote local cause.

After the paroxysms get in the habit of recurring, it is wonderful how easily they are set up, and set up, too, by causes which would have been wholly inoperative at first. I had a case lately largely due to bronchitis, and which was doing well, but in which a fresh paroxysm was brought on by the mental excitement arising from her son's getting a broken arm. Chloroform here, followed by a dose of viburnum prunifolium, gave good results.

I hear little of the use of the sulphate of sodium in asthmatic attacks. I wonder if it is much used?

Years ago I became acquainted with a physician who told me that after twenty years in the use for himself of the hundred and one remedies recommended, he had not found anything so prompt and satisfactory as the Glauber's salts. He said when the attacks come on it is usually in the night, when the lungs close, and he seems to be breathing, as it were, through dry metallic tubes. At these times he starts out of bed, seizes a handful of the salt (which he always keeps within reach), and puts it in a tumbler of water, stirs, and begins to sip it; and by the time he gets a fire kindled moisture begins to start in the respiratory passages, and the spasm relaxes. Having sipped a while longer, and gotten nicely warm, he is able to return to bed. The next morning a slight cathartic action follows, and he is about as well as before.

He attributes the good effects mainly to the extremely bitter and nauseous taste of the salts, which by reflex action speedily starts the secretion in the lungs, and so relieves the spasm.

Bloodroot or its alkaloid, the nitrate of sanguinarine, has a place also among the useful remedies in certain forms and stages of this disease, while digitalis must not be overlooked as our best heart-strengthener.

Dr. Fothergill suggests alcohol in feeble-heart cases. I wonder if it has occurred to any who have had such cases that nitro-glycerin is a much more reliable and certain heart-stimulant than alcohol? Certainly it is free from most of the drawbacks of the latter, though it is not so easily domesticated as that is.

65 Chandler Street, Boston.

UNUSUAL EFFECTS OF MALARIA.

By J. J. Norwine, M.D., Fredericktown, Mo.

CASE I.—Mamie M., age 13. Family history good; no syphilis, gout, or rheumatism; has always been a healthy, stout girl, and at present presents a very healthy appearance; menstruated first at the age of 12, and has been regular in frequency, normal in quantity, and without pain during the flow. This, in brief, constitutes the past history. Patient now presents the following symptoms: three weeks ago she arose from her bed feeling quite well, but, says her sister, she was "so nervous." This condition has existed ever since, and is gradually growing worse; her rest at night was good after once getting to sleep, probably not awaking during the night; bowels constipated; appetite failing last few days; does not complain much of pain. Upon this history, in connection with a close physical examination, I diagnosed *chorea*, the result of malarial infection, and upon this basis I gave the patient the usual antimalarial agent, sulphate of quinine, combined with that most efficient vehicle, the syrp. yerba Santa, in doses of 8 grains every two hours, giving four doses daily, and to my satisfaction the patient had entirely recovered on the third day. I should have added that a liberal mercurial purge was given prior to the quinine.

Case II.—Child, age 1½ years, suffered from chronic diarrhœa for over thirty days. The usual treatment was given,—astringents, pepsin, bismuth, and tonics,—but all seemed to only relieve for a very short time. At last my attention was called to the fact that the child's bowels were worse every other morning, and I immediately gave sulph. quininæ, gr. iv, until I gave four doses daily, and the child was relieved the second day, and made a rapid recovery. I claim that it was the antiperiodic effect of the quinine, and not the effect of a bitter tonic, that produced the cure, for the result was too quick.

Several such cases as I have mentioned have come under my notice the last few years, and we seldom see them spoken of in the journals or books, and I consider they are of vital importance, especially to the physician in a dense malarial district: for often we are called to treat patients suffering from obscure troubles, and we are at a loss to say just what the exact pathological condition is, and we treat for some serious nerve-lesion or constitutional trouble that never existed in our patient when malaria is the prime cause of all the trouble, and thus we permit our patient to endure pains for days or weeks under our empirical treatment.

In this district (South East, Mo.), where the malarial poisoning is so prevalent during nine months of the year, I claim that we cannot be too suspicious and watchful in reference to its effects upon any and every fibre of the human anatomy; for few are the diseases to which human flesh is heir that malaria cannot induce, either directly or indirectly, by direct blood-changes or by depressed nerve-function, and thus constitute an exciting cause to a latent neurine trouble that would otherwise have remained undisturbed.

THE INCOMPATIBILITY OF CHLORAL HYDRATE IN THE PRESENCE OF POTASSIUM BROMIDE AND ALCOHOL.

In a recent number of the Gazette we called attention to the results obtained by Professor Markoe from his experiments made for the purpose of determining the cause of the incompatibility of chloral hydrate with potassium bromide and alcohol. These results, or rather the explanation of these results, have been questioned by Mr. Walter Gibbons (*Pharm. Journ. and Trans.*, August 22, 1885). Mr. Gibbons claims that, although the decomposition may be partially due to the formation of chloral alcoholate, he asserts that the syrup employed in Professor Markoe's experiments plays an equally important part, and that, unless the syrup is employed, no separation will occur. He further states that a solution of two drachms each of chloral hydrate and potassium bromide in one ounce of water added to an equal bulk of spirit remained perfect (the experiment lasted thirty-six hours), whilst a solution in syrup separated almost immediately.

Mr. Henry Ehrlich (*Boston Med. and Surg. Journal*, September 3, 1885), however, goes still further, and states that he has repeated the experiments detailed by Professor Markoe, but obtained no separation into layers even after having allowed the mixture to stand for three days. He suggests that perhaps Professor Markoe did not shake his mixture carefully, or else drugs of a peculiar quality were used. Mr. Ehrlich's statements seem to be confirmed by notes published in the *Druggists Circular*, p. 178, and in the *Pharmaceutische Rundschau*.

The Therapeutic Gazette

EDITED BY
HORATIO C. WOOD, M.D.,
AND
ROBERT MEADE SMITH, M.D.,
PHILADELPHIA.

DETROIT, MICH., Nov. 16, 1885.

GEO. S. DAVIS, Medical Publisher, Box 470.

SUBSCRIPTION RATES FOR 1885.

(Journal increased to 72 pages.)

THERAPEUTIC GAZETTE (postage included).....$2.00
THERAPEUTIC GAZETTE with MEDICAL AGE.... 2.50
THERAPEUTIC GAZETTE with DETROIT LANCET. 4.25
THERAPEUTIC GAZETTE with AGE and LANCET. 5.00

Foreign subscriptions may be ordered through our agent in England, Mr. H. K. Lewis, Medical Publisher and Bookseller, 136 Gower street, London. Price 10s. Remittances may be made either by Postal Order or Stamps.

Price to Foreign Subscribers direct (postage included) $2.50 (10 shillings). English postage stamps received on remittances.

Editorial communications should be addressed 1925 Chestnut Street, Philadelphia. Business communications should be addressed to the publisher.

Leading Articles.

BROTHS AND SOUPS.

OF the various dietetic problems which require to be daily solved by the physician, one of the most important is that which deals with the obtaining of proper liquid articles of food. As is now well known, our old ideas that beef-tea contains the nutriment of the meat are exploded, but, at the same time, it is certain that the beef-tea and its congeners are of great value as restoratives and stimulants. Ordinarily the meat which is left after their preparation is thrown away. This is, of course, an excessive waste, since practically all of the simple nutritious parts of the meat are lost. According to Dr. William Roberts, this remnant can be beaten into a paste in a mortar and duly flavored with salt and other condiments, so that a highly-nourishing and also agreeable and digestible form of food can be prepared. We think, however, that the tastelessness of the beef from which the various extractives have been thoroughly removed is such that it would require a very good cook to make the dish palatable. A much more important observation of Dr. Roberts is, that cold meat infusions can be made which contain as much of the albuminoid matter as does the everywhere-known Liebig's raw soup. Indeed, Dr. Roberts asserts that the acid of this raw soup is entirely unnecessary. Infusions made from minced meat, with half its weight of water, allowed to stand for two hours, then pressed through a cloth, he found on analysis to contain over four per cent. of albumen, or, in other words, to be about as nutritious as cow's milk.

When heated to boiling these infusions coagulate into a solid jelly. Made from beef or mutton, the product has an unpleasant bloody appearance, but when prepared from veal is of a much paler color. The breast of chicken yields an almost colorless infusion, which sets, on heating, into a solid jelly, white, and of the most enticing appearance. These infusions cannot be cooked without destroying their liquid character, since they become turbid owing to coagulation of albumen at as low a temperature as 114° F. The best way of covering up their raw taste is by the addition of ordinary beef-tea or a little Liebig's Extract of Meat, but some invalids prefer them flavored with wine, and others do not object to them in their simple condition.

A highly nutritive form of liquid food, which we have used occasionally with very great advantage, is raw eggs. Dr. Roberts affirms that eggs are less digestible in the stomach when raw than when cooked, but that when raw they pass into the duodenum without being meddled with in the stomach, and are slowly digested in their passage through the intestines. How Dr. Roberts proves this we do not know. He has probably evolved it out of his inner consciousness, and we very much doubt its truth. Over and over again we have seen the stomach, in the most apathetic condition or in a state of actual revolt against food, lay hold of the raw egg with avidity. The best way of administration is simply to beat the egg with a little salt,—not carrying out the process, however, so as to make a distinctly frothy dish.

Although beef-tea is not itself nutritious, or scarcely so, it constitutes a very excellent basis for making fortified gruels or soups. It can be thickened with from four to five per cent. of a flour, which should be composed of seven-eighths of some cereal or leguminous seeds and one-eighth of ground malt. The beef-tea should be gradually warmed, and as the heat rises the diastase of the malt converts the starch of the flour into soluble starch and dextrin. It is not necessary to keep down the proportion of flour, under these circumstances, to four or five per cent. If a more

nutritious food is desired, fluidity is still obtained even after as much as twenty per cent. of the meal has been added. Of all our flours or meals, that obtained from the lentil is probably the richest in proteid matters. It contains twice as much nitrogenous material as does wheat- or oat-flour, and also much more inorganic salts. Its taste is somewhat peculiar, but is often agreeable to the palate of the invalid.

Instead of using simply flour to thicken a soup, an egg may be added to the beef-tea, or even an egg and flour. Under these circumstances, the egg must be broken into the soup after the latter has been removed from the fire and fallen much below the boiling-point. By rapid stirring and a little care a very smooth mixture can be obtained.

A very elegant and cheap soup, suitable to many cases of invalids, can be made according to the following recipe. Of course, if vegetable juices are contraindicated, this *tomato-soup* is not to be employed:

Take three quarts of tomatoes, canned or whole, and boil them until they are soft; then strain through a colander, afterwards through a flour-sieve, and reject the solid portions. Boil three pints of milk, thicken it with three tablespoonfuls of flour, then boil the liquid part of the tomatoes over again, and then stir this boiling liquid into the milk; put in a little butter; salt to taste.

URETHAN, A NEW HYPNOTIC.

IN spite of the large number of hypnotics which stand at the disposal of the practising physician, nearly all have some property which in many instances may be a decided and positive contraindication to their use; thus, chloral hydrate often produces marked cardiac depression; the bromides of potassium and sodium are uncertain, and when long used often produce bromine acne, or, indeed, decided symptoms of bromine intoxication. Paraldehyde, on the other hand, is often refused by the patient on account of its extremely sharp and disagreeable taste, and, moreover, is very transient in its action and frequently inert, while it is hardly necessary to refer to the many objections which may be urged against the steady employment or even the occasional use of morphine. A new hypnotic which may be free from many, or indeed all of these disadvantages, is a great desideratum. Urethan seems largely to fill this vacancy in our materia medica.

At a meeting of the Medical Society at Strassburg (December, 1884), Schmiedeberg reported the results of a series of experiments made with this substance, urethan, on animals, and Jolly extended these results to man (*Jahresbericht der Pharmacotherapie*, 1885, p. 134). No account, however, of these experiments has yet been published, although Kobert, in the above given reference, refers to the narcotic action determined in them. Dr. R. von Jacksch was, however, led by these statements to investigate the properties of this drug when used as a hypnotic, and he publishes his results in the *Wiener Med. Blätter*, Nos. 33, 34, 1885. Urethan is the æthelic ether of carbaminic acid, and has the formula of $C_3H_7NO_2 = NH_2CO_2C_2H_5$. It has no odor, no disagreeable taste, and forms white crystals, which are highly soluble in water.

Dr. von Jacksch's investigations were made on twenty cases with one hundred and ten separate observations, after having proved by experiments on animals (rabbits) that urethan in doses of 7½ grains for every two pounds of body weight produces no toxic symptoms. The cases in which these experiments were made embrace all varieties of pathological conditions, in many of which all of our ordinary hypnotics, for some reason or other, were positively contraindicated, and yet urethan in doses of from 7½ to 15 grains rarely failed to produce marked hypnotic effects. Although the data which at present are before us are perhaps too incomplete to form any positive conclusion as to the mode of action of this substance, yet it seems clear that the principal action of urethan is on the brain, without producing any marked irritation of the peripheral and sensory apparatus. Consequently, it is useless in the treatment of neuralgic pains, as well as in the pains of locomotor ataxia; but in other conditions, where sleeplessness is the main symptom to be combated, urethan seems to possess the greatest advantages, since it is well borne by the patient, it produces absolutely no unfavorable symptoms, and the sleep which it produces seems identical with normal physiological sleep. It would also appear that this remedy is particularly suitable for use in the treatment of diseases of children, where the need of a safe and sure hypnotic is greatly felt. It is also worthy of trial in the treatment of alcoholic delirium and in the mania of insanity. Urethan may be given in solution in water either with or without some flavoring, in doses of from 7½ to 15 grains, repeated

after one or two hours if necessary. It is at present, we believe, manufactured only by Merck, but we trust that further experiments will be made with it, and its true value determined.

CONTRIBUTION TO THE DOCTRINE OF FAT-ABSORPTION.

THE physiology of nutrition is still in a stage that could with propriety be called an infantile one, for even respecting the most fundamental topics of nutrition our knowledge is uncertain and superficial. Considering the important *rôle* which the hydrocarbons play in the nutritive functions of the economy, it is a deplorable fact that the subject of the absorption of fat is still enshrouded with a good deal of obscurity. In the *Zeitschrift f. physiol. Chemie* (*Pharm. Centralb.*, No. 30, 1885) we note an able paper on the subject written by Dr. Landwehr, which every scientific practitioner will peruse with gratification. All authors agree that the absorption of fat takes place solely in the intestines and that the stomach has no part in this function, but they are greatly at variance as to which secretions effect this absorption. As the digestive power of the intestinal juice proper (the existence of which even has been questioned) appeared to all investigators of a doubtful nature, the biliary and pancreatic secretions were naturally looked upon as the true solvents of fat. That the bile is an important factor in the process of fat-absorption is admitted by all observers. "The bile emulsifies fat," we learn from our text-books; but on mixing bile with fluid fat, we find that a fine division only of the latter, and not a permanent emulsion, is obtained, and that the fat on standing soon separates. This behavior will be shown by every fluid having the viscosity of the bile. In this simply physical property, then, of the bile a physiological and digestive function cannot be looked for. The pancreatic juice and the watery extract of the fresh pancreatic gland form, it is true, with fat, a fine and permanent emulsion; but, as this emulsion takes place instantly, it must be attributed likewise to physical properties of the pancreatic secretions, and not to an action of any ferment; though there can be no doubt of the fact that a ferment is present which will saponify fat. Experimenting with mucin, Landwehr succeeded in separating from it a carbohydrate which he termed animal gum (or mucilage). Mucin is to be regarded as a combination of a carbohydrate with a globulin substance. The great resemblance existing between animal and vegetable mucilage, and the pronounced capacity of the latter to form emulsions, induced the observer to look for animal mucilage in animal emulsions. This animal mucilage was found likewise in the chyle and in the milk. The emulsifying power of the pancreatic juice suggested naturally the presence of animal mucilage, which was actually obtained from the pancreatic gland in a quantity of about 1 gramme. (Its formula was found by analysis to be $C_6H_{10}O_5$.) Like vegetable mucilage, the animal one loses by boiling with water its viscous property, and, consequently, considerable of its emulsifying capacity. (In the vegetable mucilage these two conditions are distinguished by different names: it is called arabine, if it is soluble in water, and can be filtered easily; if it only swells in water, it is called metarabine.) In the pancreatic juice the animal mucilage is in a swollen state intimately connected with lime. Having demonstrated the existence of animal mucilage in the pancreatic juice, the emulsifying properties of the latter can be safely referred to the action of the former.

But how do we explain the emulsifying power of the bile? The mucin obtained by addition of acetic acid to bile showed, strangely, no separating carbohydrate on being boiled with diluted acids. This is to be explained as follows: If a solution of salivary mucin, rich in carbohydrates, is mixed with bile, acidified with acetic acid, and freed by filtration from the resulting precipitate, the latter will be found to contain no carbohydrate, while the same exists freely in the filtrate. The precipitate, however, will contain biliary acids in abundance. This shows that the biliary acids have brought about a decomposition of the mucin and a liberation of the carbohydrates through the greater affinity of the biliary acids than of the animal mucilage for the albuminous components of the mucin. This throws an entirely new light upon the digestive functions of the bile. If this secretion is poured into the intestines, it meets with a copious quantity of mucus coming partly from the saliva, partly from the intestinal walls. All this mucus is decomposed by the bile, liberating animal mucilage, which, in its turn, emulsifies the fatty matter it finds. In the intestinal mucus, then, we find the principal source of the animal mucilage, and the most important function of the salivary mucus is accordingly the ultimate liberation (in the intestines) of animal mucilage. In

the light of this function, the diastatic action of the saliva and the formation of the bolus will occupy a secondary place. It is but necessary to watch a dog swallowing rapidly a piece of meat to be convinced that, although the mouth is filled with saliva, neither any salivary action upon the glycogen of the meat, nor any especial influence of the saliva upon the formation of the bolus, can take place. This view at the same time explains why the absorption of fat is rendered so very difficult in dogs having a biliary fistula.

NOTES ON COCAINE.

IN the *American Journal of Pharmacy* for October, 1885, there is a very elaborate article upon the alkaloids of cocoa-leaves by Dr. A. B. Lyons, of Detroit, which appears to show that these leaves vary very much in the amount of cocaine which they contain. The maximum found in any of the leaves which have hitherto reached this country is 0.8 per cent., while in some of the leaves examined by Dr. Lyons it is 0.15 per cent. A very important result of Dr. Lyons's investigation is a probability that there exists in the cocoa-leaves one or more alkaloids. It seems probable that among these is ecgonine. This alkaloid can be made out of cocaine by the action of strong hydrochloric acid, which causes the cocaine to be split up into benzoic acid, methylic alcohol, and ecgonine. Calmels and Gussin think that ecgonine is rather an acid than an alkaloid, as it combines with alkaloids. It forms, however, double salts with platinum and gold chloride. The various impurities which exist in commercial cocaine deserve a very careful study. The only method we have at present of completely separating the cocaine is by repeated crystallization.

A use of cocaine which, so far as our recollection goes, is novel, is in the treatment of whooping-cough as advocated by Dr. Moncorvo, of Rio Janeiro, who employs it in conjunction with resorcin. He first swabs out the throat with a ten per cent. solution of cocaine and then with a saturated solution of resorcin. He claims that very advantageous results are reached, as he believes, from the anti-parasitic action of the resorcin. Whether this treatment is as useful as it is novel is, in our opinion, more than doubtful, though Dr. L. Barbillion (*Revue Mensuelle des Maladies des Enfants*, August, 1885) has also employed a five per cent. solution of cocaine locally applied to the pharynx, tonsils, and base of tongue, with a brush in the treatment of whooping-cough. He states that the immediate effect of this application is to considerably diminish the number of paroxysms of coughing, and he reports a number of cases in which this treatment alone was employed, and in which marked improvement, as regards the number and violence of the paroxysms of coughing, certainly seemed to have been obtained.

The method of using cocaine originated by Dr. J. Leonard Corning (see October number of THERAPEUTIC GAZETTE) bids fair greatly to increase the range of its application. He is probably correct in believing that the cocaine is removed from the part after its injection by the circulation, and its local effects thereby put an end to, so that, if by means of the Esmarch rubber bandage and the elastic ligature the circulation in the limb is arrested, the action of the cocaine is rendered much more permanent. Acting upon this suggestion of Dr. Corning, Dr. M. J. Roberts has succeeded in operating upon a chronically-diseased elbow-joint without giving either ether or pain, although the joint was exposed and the bone drilled and gouged in various places. One or two drops of cocaine were thrown into the tissue which was to be cut through, and at a very short distance from this puncture a second similar injection was made, until finally about twenty minims of the cocaine had been thrown into as many openings. In about fifteen minutes later an Esmarch bandage was applied to the limb from the tips of the fingers to within three and a half inches of the elbow-joint. Superficial anæsthesia having been secured, the deeper tissues were penetrated by the needle and about two minims of the solution injected at each point; after this the elastic band was put round the arm about four inches above the elbow and the operation proceeded with. In the various drillings and cuttings the bone was deeply penetrated, and it would seem, therefore, that if there be any operation upon the limbs for which cocaine will not suffice as an anæsthetic, it would be that practised by Dr. Roberts,—yet no pain was produced. It does appear as though ether is to become unnecessary in surgery of the extremities.

At a recent meeting of the Philadelphia College of Physicians a paper was read by Professor Da Costa upon the use of cocaine in the relief of hay-fever, giving glowing accounts of the results obtained. Professor Harrison Allen also detailed his experience, in general coinciding with the first speaker. We

have, ourselves, used the alkaloid during the last six months for the same purpose, and there can be no doubt that it has great value. It should be employed in four per cent. solution, 4 or 5 drops of which is to be thrown into each nostril by means of the ordinary medicine-dropper, the point of which has been introduced about half an inch within the nostrils: the patient being in a recumbent position, or with the head thrown back, the alkaloid immediately diffuses itself over the internal surfaces. The application is in some cases required twice in the twenty-four hours, but frequently once in the twenty-four hours suffices. It does not cure the disease, but gives temporary relief, and, as hay-fever naturally ceases with the returning autumn, palliation in this case means a great deal. The cocaine fails entirely in a certain percentage of the cases, even when used in the eight per cent. solution. Dr. Allen states that his observation has been that in these cases the mucous membrane of the nose is nearly wanting in the erectile tissue, and that the success of the drug is in direct proportion to the sponginess and vascularity of the mucous membrane,—a fact which indicates that a large proportion of the power of the alkaloid over the disease is dependent upon its property of contracting blood-vessels.

THE PREPARATIONS OF RHAMNUS.

At the recent meeting of the American Pharmaceutical Association, Mr. George W. Kennedy read a paper upon the relative laxative action of rhamnus Purshiana and rhamnus catharticus, in which, after careful experimentation, he arrives at the conclusion that the preparations manufactured from our purshiana are decidedly the more active. This paper also seems to indicate that the best preparation of the drug would be the resin precipitated in concentrated alcoholic tinctures by water in the usual manner. In doses of from 1 to 3 grains this resin acted as a resin and cathartic. The fluid preparations of rhamnus are so disagreeable that we trust this resin will be put upon the market for administration in pill form. An important fact is that preparations made from the bark of the rhamnus frangula the first year after gathering are apt to nauseate, whereas, owing to the glucosic fermentation, when the bark is two or three years old only the purgative properties are retained. It is for this reason that the Norwegian Pharmacopœia requires the bark to be kept one year before use. It is probable that the tendency which is sometimes seen in preparations of cascara sagrada to cause sickness of the stomach would disappear in similar manner if the bark were long kept.

THE TREATMENT OF SUNSTROKE.

During the last hot weather of July and August of the present year, according to the report of Dr. Horwitz, a very large number of cases of sunstroke were treated at the Pennsylvania Hospital with remarkable success. The plan of treatment was almost uniform. It consists of putting the patient at once in the ice-water bath, administering digitalis and antipyrine, morphine, and, where convulsions occur, musk in 10-grain doses by the rectum every half-hour. The effect of the latter drug in subduing the convulsions is said to have been extremely pronounced. So far as our recollection serves, its employment is a novelty in thermic fever. The results of the use of antipyrine were also very satisfactory: in only one case where it was administered did it fail to keep back the rebound of the temperature which is so apt to follow the fall produced by the cold bath. The employment of antipyrine in sunstroke, we may say, is not altogether new, it having been reported upon favorably in New York.

There is one point in the treatment of sunstroke to which all hospital authorities should have their attention earnestly directed. Many years ago, Dr. H. C. Wood, in experimenting upon animals, found that if the dog or rabbit was immersed in the cold bath so soon as it became unconscious, it recovered; but if it was allowed to lie for a few moments, the withdrawal of the heat almost always failed to bring about recovery. Often the animal would become conscious; but paraplegia and other paralytic symptoms would remain, and death soon come. Clinical experience abundantly affirms this. It is certain that minutes, even seconds, are in the cases of sunstroke of the utmost importance. With the ordinary covered ambulances that are now employed by our hospitals there would be no difficulty in stripping the patient, at least to his underclothes, and rubbing him with ice, administering antipyrine hypodermically, etc., etc., whilst *en route* for the hospital. During hot weather every ambulance sent out on telegraphic summons from our hospitals should be provided with a resident physician, ice,

and all necessary appliances. In this way we believe that many lives would be saved. In our opinion a case of sunstroke treated immediately would very rarely prove fatal.

APOMORPHINE IN OPIUM-POISONING.

A DRUG which is not used in this country as much as it deserves is apomorphine. The name of it and the fact that it is a derivative of opium fosters the idea that it would be an unsafe emetic in cases of opium and other narcotic poisonings. It has, however, as is well known, been used successfully in poisoning by hydrocyanic acid; and in the *British Med. Journ.*, October 3, 1885, is reported a case in which, twenty minutes after the swallowing of a wineglass of laudanum, $\frac{1}{10}$ of a grain of apomorphine was given hypodermically. The statements are not very clear as to the exact condition of the patient, but she was conscious at this time and walking about. In five minutes after the injection she vomited freely and became quite prostrated; five minutes later she again vomited freely. After this she seemed very weak, but rallied without difficulty under the influence of coffee and brandy by the stomach, and ether subcutaneously administered. After recovery she affirmed that she had taken fully two ounces of laudanum.

PYRIDINE.

IN a recent issue of the GAZETTE we referred to the results obtained by Prof. Germain Sée, of Paris, in the treatment of asthma with pyridine. Since then we have received several inquiries as to what this substance is. Pyridine has been known to chemists since 1856, when it was discovered by Williams. It is the foundation of the group of compounds which are known as the pyridine bases, and which are formed in the dried distillation of nitrogenous organic compounds, such as bones, and is met with as the decomposition product of a few alkaloids, particularly of tobacco. Pyridine is a colorless, peculiarly smelling fluid, which, as manufactured by E. Merck (*Deutsche Med. Zeitung*, September 7, 1885), is readily soluble in water. Its boiling-point lies at about 116½° C. It rapidly absorbs water, and then boils at a lower temperature. Until used by Prof. Sée, pyridine was only of chemical interest.

From the fact that tobacco-smoke, especially that of cigarettes, frequently serves to relieve asthma, and as it is well known that tobacco-smoke contains pyridine in considerable quantity, Dr. Sée was led to attribute the curative effects of tobacco to the pyridine contained. He therefore experimented with the use of inhalations of the pure pyridine in asthma and dyspnœa from heart-disease. One or two teaspoonfuls of this fluid may be poured on a plate and the fumes inhaled by holding the face closely over it. These inhalations may be continued for twenty or thirty minutes, and it is claimed will frequently arrest the dyspnœic attacks.

PHARMACOPŒIAS.

THE International Pharmacopœia, which had been prepared by Mr. von Waldheim after conference with the commission appointed by the Pharmaceutical Congress in London, 1881, was approved in order to publish this as soon as possible. If this movement should lead to a unification of the Pharmacopœias of the various civilized countries, it would be a very distinct advance; but some of the European standards are so loaded down with what we consider bad preparations, that the prospects of immediate success of the International Pharmacopœia are not very good. In time, however, it is probable that international comity may prevail.

The new British Pharmacopœia is a handsome volume of nearly five hundred and fifty pages, whose red edges and clear type mark the union of the æsthetic with the practical. We notice that the nomenclature has been changed, so that it now corresponds with that of the United States Pharmacopœia, the terminations of the names of the salts having been changed, and also the alkaloids. Thus, for ammoniæ nitras is substituted ammonii nitras, and quiniæ sulphas finds itself displaced by quininæ sulphas, atropia by atropina, etc. The additions to the British Pharmacopœia are quite numerous, including meconic acid, cocaine, cascara sagrada, gelsemium, thymol, cimicifuga, salicylic acid and its salts, methylic alcohol, lactic and hydrobromic acids, etc., etc. The additions are five or six times as numerous as the dismissals. This tendency of pharmacopœias to grow in bulk and in the number of their standard remedies, as well as of their preparations, is a very serious one. If it continue, the medical profession by and by will be wellnigh swamped by the very richness of its possessions. It is plain that in

this matter the pharmacist is perpetually outstepping the physician, and leading him on to a very uncertain end. Every one knows that the triumphs of medicine are achieved by comparatively few remedies, and yet we multiply the lists without number.

The British Pharmacopœia further follows the United States in arranging its preparations and compounds alphabetically instead of separately, and in giving both old and new chemical formulas. It very wisely, however, has departed from the rulings of the pharmaceutical doctrinaires, who, by uniting with the servants of the New York publishers, ruled our late Pharmaceutical Convention in not substituting in the formula parts by weight for parts by measure.

The editors of the British Pharmacopœia are Professors Redwood, Bentley, and Attfield, and, so far as we can perceive in our somewhat hasty examination of the book, they have done their work well; but to detect errors in the details of such a work as the Pharmacopœia belongs more properly to the province of the pharmacist than to that of the physician.

OLD BOURBON WHISKEY.

AS Louisville has the reputation of being the great centre of good whiskey production and good whiskey drinking, we suppose the editor of the *Louisville Medical News* must be considered as very high authority upon questions involving the purity of alcoholic drinks, and we therefore notice with pleasure that, according to this editor, our American wines, especially those made in California, are almost without exception "the pure juice of the grape fortified with brandy to keep it from souring;" but we notice with sorrow, not for ourselves, but for our readers, that the so-called old Bourbon whiskey has under modern manipulation become a beverage "far more deleterious and injurious in its influence than absinthe."

The editor of the *News* says, "In former years, by the old-style sour-mash process, one bushel of grain yielded by the natural fermentation one and a half gallons of whiskey. This article contained the volatile oils and the pure alcohol eliminated by the low temperature. It was the kind of whiskey our forefathers used almost to excess without any apparent injury to their constitutions; and probably the moonshine whiskey the mountaineers use now is of the same character, having nothing worse than alcohol. Under its use there is quick stimulation, which subsides gradually as the alcohol is eliminated. The greed of distillers has urged them to push the distillation, so as to get as much whiskey as possible from the grain; from the old-time standard of one gallon and a half they increased the product to three, and then to four, and some distillers boast of getting even five gallons of whiskey from a single bushel of grain. The increased product is obtained by raising the temperature until both the volatile oils and the essential oils from destructive distillation are thrown off, consequently a large percentage of fusel oil is found mixed with the whiskey, and this cannot be gotten rid of except by some chemical process or by redistillation at a low temperature. In the course of a year's time much of the fusel oil will be transformed into fragrant ethers, which, being quite volatile, will evaporate, but enough of this oil will still remain in the whiskey to seriously damage the stomachs of those who drink high-distilled whiskey as a daily practice; or, if the stomach escape, the irritant affects the kidneys, producing granular degeneration, a form of Bright's disease which is to-day frightfully prevalent and seemingly on the increase."

ANTIPYRINE IN ARTICULAR RHEUMATISM.

REVIEWING the numerous clinical tests to which antipyrine has been subjected, we must confess that on the whole the antipyretic virtues claimed for it by its discoverer asserted themselves with a satisfactory promptness, and that of all new antipyretics this drug has alone succeeded in securing a firm ground in the field of practice. More recent researches, moreover, go to show that the usefulness of antipyrine is not limited to infantile affections and the typhoid and phthisical hyperpyrexia, but that also in another important affection, viz., articular rheumatism, the drug evinces powerfully antipyretic and often curative virtues. It is true that salicylic acid and salicylate of sodium are in rheumatism distinctly specific remedies, and that no drug can be thought worthy to replace them, unless alongside of an equally specific influence over the pathological process it would show a greater constancy of action and a greater power to avoid cardiac implication. Neumann, of the city hospital of Moabit (Berlin), examined the action of

antipyrine in articular rheumatism in a large number of cases, and reports his observations to the *Berlin. Klin. Wochenschrift* of September 14, 1885. Looking over the literature of the subject, we find that Neumann was not the first to employ antipyrine in rheumatism, but that Lenhartz (*Deutsche Medicinische Wochenschrift*, No. 31, 1884) reported eight observations, Alexander (*Breslauer ärtzl. Zeitung*, No. 14, 1884), and Demme (*Fortschritte der Medizin*, No. 21, 1884) each seven observations.

Neumann gave the drug in numerous cases of rheumatism, but regards only seventeen of them worthy to be reported, as in the rest salicylic acid and salicylate of sodium had been given simultaneously. He summarizes his results by declaring that antipyrine acts in articular rheumatism very nearly in the same manner as salicylic acid and salicylate of sodium; as under the administration of the latter pain and swelling disappeared more or less, but he also noted the same proneness to cardiac complications and to relapses, even when the drug was continued for a long time after all morbid symptoms had disappeared. In some instances antipyrine, as is likewise the case with salicylic acid, had no influence at all over the affection. No intoxication-symptoms were ever noted in any case.

This short but satisfactory report on the clinical services of antipyrine in articular rheumatism demonstrates that the drug, though in no respect surpassing salicylic acid or salicylate of sodium, can be regarded as a useful adjuvant to them, or can wholly replace them, if these should either fail to act or be for some reason or other contraindicated.

IT is rumored that the professorship of pharmacology in the Johns Hopkins University has been accepted by Prof. Matthew Hay, of Scotland. The choice appears to us a very good one. We have no personal knowledge of the teaching ability of Prof. Hay, but certainly his article on the Action of Purgatives has shown him to be possessed of great acumen in research; and with the resources of the Johns Hopkins University at his disposal and his time at his command much is hoped for from him.

Reports on Therapeutic Progress.

PUERPERAL DIPHTHERIA.

DR. HENRY J. GARRIGUES, of New York, read a paper on this subject at the meeting of the American Gynæcological Society, held September 23, 1885 (*N. Y. Med. Journ.*, September 26, 1885). This was a disease not referred to in the majority of text-books. It was one of the forms of puerperal fever, or rather one of the different diseases included under that term. It was distinguished by the appearance of diphtheritic exudation somewhere in the genital tract of the puerperal woman. It was accompanied by well-marked general symptoms, imperilled life, and called for active treatment. The paper was based upon twenty-seven cases treated in hospital practice and two in private practice. The characteristic feature of the disease was the diphtheritic infiltration, which was usually of a light pearl-gray color, generally appearing in small spots and coalescing or extending by involving new areas. The exudation was firmly adherent to and imbedded in the underlying tissue. It was most marked at the points where the canal became narrow. This might be explained by the more frequent occurrence of lacerations at those points. The posterior wall of the vagina was more commonly attacked than the anterior wall, which was probably due to the fact that it was bathed with the discharges from the uterus. The exudation might, however, appear on entirely healthy portions of mucous membranes, which had not been the seat of laceration. The surrounding parts were more or less swollen. The connective tissue of the pelvis was infiltrated with serous fluid and was sometimes the seat of ecchymoses. The skin was sometimes the seat of a dusky erythema, consisting of minute spots, disappearing on pressure and not elevated. In one case petechiæ as large as hemp-seed existed. These were not affected by pressure. The same patient afterward developed erysipelas. In five cases ending fatally autopsies were made. The uterus was much enlarged, sometimes reaching almost to the umbilicus two weeks after labor. The cervix having been torn, might show diphtheritic patches or a thin gray film. In two cases large portions of the cervix sloughed and the vagina became gangrenous. The tissue of the uterus was friable and might be almost diffluent. The diphtheritic exudation might affect the Fallopian tubes. In some cases the muscular tissue of the uterus was

scooped out as in dissecting metritis. This occurred in four of the cases of puerperal diphtheria. In one case the mass thrown off was four inches long, two inches wide, and one inch thick. These masses had a pyriform shape, their outer surface was of a gray color, and the inner surface of a flesh-color. They were perforated with a number of holes leading into the uterine sinuses. Under the microscope these masses were shown to consist of smooth muscular fibre in a more or less advanced state of fatty degeneration. The connective tissue was increased. Lesions were also found in other organs and occasionally in the joints. Difficult labors and a previous weakened condition of the patient predisposed to the development of the condition. The real cause of the disease was, however, an infection from without. He had never been able to convince himself that the poison passed from one patient to the other, but it seemed to be in the air of the ward. When a ward had been fumigated with sulphurous acid there would not be a seriously sick patient for weeks. That the poison came from without was also shown by the fact that, when the prophylactic treatment to which he would refer was adopted, the disease did not develop. The first symptom which showed a deviation from a normal course was usually the occurrence of fever, which mostly appeared from two to four days after delivery. Sometimes there would be a chill or chilly feelings. The temperature rose gradually as a rule. It had ranged from 100° to 107° F., the average being from 102° to 104°. Anorexia, vomiting, coated tongue, and diarrhœa showed disturbance of the gastro-intestinal canal. The patient complained of pain in the epigastrium and one or both groins, sometimes extending into the legs. Examination showed the uterus larger than it should be and quite tender. Tenderness was often also found in the groins, and some swellings might also be observed. The lochial discharge was often scanty and offensive, but in some cases it had been normal. Where there was expulsion of the tissues of the uterus, there had been a purulent discharge until expulsion had been accomplished. The diphtheritic patch commonly appeared from three to seven days after delivery. It continued to spread for several days, and usually stopped in from three to eight days after the beginning of treatment. In one case the diphtheritic patches also appeared on the tongue, indicating that the disease was identical with the ordinary form of diphtheria attacking the throat. The irritation of the nervous system was shown by headache, stupor, and delirium. There was alteration of the renal secretion and sometimes painful micturition. Three patients had albuminuria. In two cases jaundice bore testimony to the perverted condition of the blood. The sweet breath and profuse sweats of septicæmia were observed twice. One patient developed painful arthritis of the elbow-joint. When once the diphtheritic process was arrested, the patients recovered rapidly. There was scarcely any difficulty in the diagnosis. When the injections of bichloride of mercury were employed they caused a yellow discoloration of abraded surfaces. This was strictly limited to the abraded surface, and was unaccompanied with general symptoms. When the chloride of zinc was applied to the affected surface in the treatment of the disease, a slough was caused having the color of the deposit, and the physician was sometimes at a loss to determine whether or not the disease was spreading. The point was decided by noting where the application was made, and by observing the edge of the deposit. The diphtheritic deposit had a scalloped outline, while the outline of the slough from cauterization was smooth. As to prognosis, five out of twenty-nine patients died, giving a mortality of 17.2 per cent. Another might have survived, for she lived thirty-two days, and died from rupture of the uterus, which had been thinned by sloughing, while an assistant was giving an intra-uterine injection. The post-mortem showed the walls of the uterus to be extremely thin. The duration of the cases ending in recovery was usually about two weeks. In cases in which a portion of the uterus was scooped out the organ was left in a weakened condition, which in future pregnancies might predispose it to rupture. In the way of prophylaxis, it was recommended to limit the vaginal examinations during labor as much as possible. The finger or hand should not be introduced into the uterus unless absolutely necessary. The delivery should be so accomplished as to avoid as much as possible wounding of the genital canal. Instruments should be used with the greatest care. The most important element in the prophylaxis was the use of bichloride of mercury as an antiseptic. Everything coming in contact with the patient should be washed in the solution of corrosive sublimate, 1 to 2000. After this treatment was introduced only one case appeared in six months, and that was due to carelessness on the part of a resident, who delivered a woman immediately after

removing a macerated fœtus from another patient. After the disease appeared the treatment must be energetic. The only treatment that had given him satisfaction was that with chloride of zinc. The affected parts were touched with a solution of equal parts of chloride of zinc and distilled water. This was rather painful, and an anæsthetic might be used. A warm solution of corrosive sublimate, 1 to 2000, was used for intra-uterine injection where this was required, and subsequently a suppository of fifteen grains of iodoform was introduced. If this was done the process need not be repeated more than once in the twenty-four hours. The vagina was to be douched every three hours. The parts should be examined every day, and, if the process was not arrested, the application of chloride of zinc was to be repeated. If the disease was limited to the vagina and vulva, the intra-uterine treatment was omitted. Ergot was also given, with the purpose of causing contraction of the uterus. Morphine, quinine, and digitalis were used as indicated. High temperature was combated with sponge-bathing, salicylic acid, and, if necessary, the rubber coil. Carbolic acid was also given, sometimes combined with the compound tincture of iodine. If the temperature was not very high, warm poultices were preferred. Where there was diarrhœa, warm poultices were also considered preferable. Samples of the occlusion bandage to be used after labor were exhibited. They consisted of a pad of absorbent cotton wet with the corrosive-sublimate solution; over this a piece of oiled muslin or gutta-percha tissue, and over all another piece of absorbent cotton and a piece of muslin or flannel to attach it to the binder.

Dr. W. T. Lusk, of New York, had treated, ten years ago, one hundred and fifty cases of this affection, with twenty-eight deaths. The epidemic could be traced to a patient brought into the hospital after a long labor. She was suffering at the time from a syphilitic ulcer of the vulva, which was excessively inflamed. The child was extracted with forceps, and the inflamed perineum was torn. Soon after this the diphtheritic deposit appeared, and the whole ward was infected. The first cases were the result of transference from the patient, for the question of contagion was not then recognized as it is now. After a time great care was taken to avoid every possible source of contact, but the disease continued, and could be explained only on the supposition that the air of the ward was filled with germs. In the first cases the treatment consisted in the application of equal parts of solution of persulphate of iron and compound tincture of iodine. The disease usually began with a certain amount of mildness, and gradually became more severe. Of the first twelve patients only two died, while in the second set of twelve only two recovered. In the progress of the epidemic the entire system seemed to be affected, even before the advent of labor. Since the adoption of the use of corrosive-sublimate injections he had not seen a case of puerperal diphtheria; neither had he had a death from fever, nor any cases of fever, even the old-fashioned "milk-fever" being absent.

Dr. H. P. C. Wilson, of Baltimore, was averse to the use of bandages of any kind after delivery, preferring to have the napkins placed under the patient so as not to obstruct the free flow of the discharge, and to use frequent washing of the vagina with antiseptic solutions.

Dr. W. L. Richardson, of Boston, had treated many cases of puerperal diphtheria with ill success until the appearance of Dr. Garrigues's paper. After the use of the pad and the corrosive-sublimate solution for the hands of the attendants and nurses was begun, the hospital had been almost entirely free from the disease. There had been no death since these measures were adopted.

Dr. John Byrne, of Brooklyn, asked as to the frequency of cicatricial distortions of the vagina after diphtheria, and related an interesting case of that sort.

Dr. Garrigues thought that the indorsement of Dr. Lusk and Dr. Richardson would be sufficient to induce others to try the occlusion-pads. During the year preceding the introduction of the new method of treatment the mortality was nearly seven per cent. During the next year, with the new method of treatment, the mortality was one and a half per cent. During the second year it was less than three-fourths of one per cent. In the institution in which these observations were made there were many disturbing elements, one of the most important being its connection with a large general hospital. In this new method of treatment the antiseptics were applied only to the outside in normal cases. Only in abnormal cases were vaginal and intra-uterine injections employed. He had seen only two of the patients subsequent to recovery. In one there were great shortening and narrowing, but during pregnancy softening took place and the labor was quite easy. The second patient was pregnant, and the vagina appeared to be in good condition.

ORCINE.

Among the carbon compounds the aromatic series forms an important group which includes many of our most potent antiseptics and antipyretics, such as naphthaline, chinoline, phenol, carbolic acid, salicylic acid, kairine, antipyrine, etc. DR. ANDEER (*Gazzetta Medica Italiana-Lombardia*, July 4, 1885; *Medical Chronicle*, September, 1885), who has previously written on resorcine, in the present communication treats on orcine, another and nearly allied member of the same class. Orcine possesses almost all the physical properties of resorcine. It is a white substance, with a peculiar sweetish and afterwards bitter taste, and a feebly aromatic odor; it is soluble in all the ordinary media, and crystallizes out of aqueous solutions; it produces a deep blue or violet with the ferric salts, and it occupies the same position as resorcine in the hexagonal group O—H. In physiological properties orcine stands between resorcine and paraglaucine, and seems fitted to supply the deficiencies of the former. While resorcine in small doses is purely astringent, and in large doses powerfully caustic, orcine in the largest doses is never more than astringent and antiseptic. Administered in toxic doses it gives tonicity to the muscles, both voluntary and involuntary, and after a time it suppresses their function, attacking especially the muscular fibres of the heart, arresting its movements, and so causing death. While resorcine produces marked ischæmia of the tissues, orcine, on the other hand, produces marked hyperæmia, hence its action on the muscles.

RESULTS OF INVESTIGATIONS REGARDING SOME NEW DRUGS.

The Connecticut State Medical Society has undertaken a work of collective investigation which is likely to lead to results of some practical value. A committee appointed by the said society has issued circulars of inquiry on the subject of certain new drugs which have lately been put on the market with more or less strong endorsements. The answers so far obtained relate to convallaria majalis, piscidia erythrina, cascara sagrada, and certain of the oleates.

The conclusions reached are by no means positive, but are at least valuable and suggestive.

With regard to convallaria majalis fifty replies were received. The testimony was to the effect that convallaria does not have any cumulative effect, that it rarely disturbs the stomach. It appears to be milder and less certain in its action than digitalis. It is doubtful whether it has much diuretic effect.

Piscidia erythrina, or Jamaica dogwood, has been announced as a drug having hypnotic and anodyne effects. The thirty-two answers received by the committee show it to be very doubtful whether any such properties exist to a sufficient extent to warrant its introduction into medicine. The specific effects are sometimes obtained, but not with any certainty. On the other hand, it is possible that too small doses were given on account of a supposed danger in its use.

Cascara sagrada is a remedy that has been widely used and well spoken of. Its effects are those of a stomachic tonic and laxative. The forty-seven replies obtained by the committee hardly sustain the view that this drug is a superior one for use in habitual constipation. Many find that it is useful, but few think it in any wise specific. A majority did not find its effects diminished by constant use. Dr. Thomas H. Russell, who made a number of careful observations, speaks most highly in its praise. He advises its use in doses of from 15 to 30 drops of the fluid extract three times a day. On the whole, it is safe to affirm of cascara sagrada that it is one of the best medicines for habitual constipation.

The contributions to the subject of the oleates are insufficient to justify any conclusions as to the special superiority of these preparations.

The Connecticut Medical Society has entered upon a useful line of work, and we trust it will continue its investigations. Well-organized medical societies can by means of collective investigations in certain lines do as much as the city professor with his hospital wards. There needs to be only a careful selection of subjects, and, so far as possible, some personal knowledge of the character of the workers. Some men have no power of weighing evidence and reaching sound conclusions. It is this fact that limits the usefulness of collective work, and makes it necessary for those conducting it to be extremely careful.—*Medical Record*, September 12, 1885.

EFFECT OF THE CARLSBAD CURE ON THE DIGESTIVE FUNCTIONS.

Queries as to the therapeutic indications for the use of the Carlsbad waters are not infrequently addressed to the American practitioner by his (abroad proverbially) dyspeptic patients, and probably find many at a loss

for a proper and well-founded answer. The world-renowned celebrity of the Carlsbad thermal water, inducing annually thousands of patients from all quarters of the globe to make a sanitary pilgrimage to the little Bohemian town, justly attracts our attention, and leads us to inquire into the medicinal virtues of those springs.

Dr. Jaworski, the well-known docent of the medical clinics of Cracow and (during the summer) practitioner at Carlsbad, has published a little pamphlet (*Zeitschrift für Therapie*, June 1, 1883), which embodies his valuable clinical experience of many years at Carlsbad, and is admirably suited to furnish all the desired knowledge on the therapeutic effects of the Carlsbad cure.

In the first experimental series (seventeen individuals and one hundred and thirty-six observations) the behavior of the gastric functions, one-, two-, three-quarters of an hour after the ingestion, of the Carlsbad water was examined. For this purpose 10 to 30 oz. of Carlsbad water of various temperatures (18° to 55° C.) were introduced early into the empty stomach, and after waiting one-, two-, three-quarters of an hour 4 oz. of distilled water were poured into the stomach, and immediately aspirated. The thus obtained gastric liquid was examined—as to acidity or alkalinity, free muriatic acid, mucus, biliary coloring matter, digestive capacity, and microscopically. The interesting results of this examination are briefly as follows:

I. 1. The neutralized gastric juice regenerates itself within one- to two-quarters of an hour, reaches its maximum not before the second hour, and returns very slowly for several hours to its original reaction.

2. The digestive ferment is totally destroyed by the Carlsbad water, regenerates itself, though very slowly, and not in the same proportion as the gastric juice, thus placing the maximum of the digestive capacity behind the maximum of the acidity of the gastric juice.

3. The salts of the Carlsbad water disappear from the stomach later than the water itself, often not before three-quarters of an hour to one hour. As long as they remain in the stomach they annihilate the peptonizing capacity of the gastric juice.

4. The gastric fluid grows poorer in mucus after introduction of the Carlsbad water than previously.

5. A copious flow of bile often takes place in the second and third half-hour after ingestion of the Carlsbad water.

6. Differing in many respects is the action of the thermal water when taken cold or warm, in small or large quantities, at once or repeatedly.

7. Pathological conditions cause a deviation of the therapeutic effects of the water, chiefly a slowness of action.

8. The urine is neutralized by 10 oz. of the thermal water.

9. The influence on the intestinal functions was in the exhibited quantities very insignificant.

10. The subjective symptoms of most cases experienced a favorable alteration.

II. The second experimental series (twelve individuals with forty-eight observations) was intended to study the digestion of albumen in the stomach under the influence of the Carlsbad water, with the view of ascertaining whether the digestive capacity of the gastric juice was actually checked by the Carlsbad water. For that purpose the experiment-individuals received one morning only ice-water, the other only Carlsbad water, and the third day Carlsbad water and hard-boiled egg-albumen together, with or one-, two-, or three-quarters of an hour after the water. The gastric contents were again aspirated and examined as before (*i.e.*, for peptone and syntonin). The main results were:

1. The acidity of the gastric juice under the combined influence of Carlsbad water and albumen is larger than that following the introduction of ice-water or of Carlsbad water alone, and sometimes even larger than after the ingestion of albumen alone.

2. The simultaneous introduction of Carlsbad water and albumen reduces the digestive power of the stomach considerably.

3. The peptonizing capacity, however, increases if the albumen is introduced one-half, or better, one hour after the drinking of the water, this increase being the greater the longer the interval is between the ingestion of the water and that of the albumen.

4. The acidity of the gastric juice is augmented by this proceeding to a very great extent; and

5. The mechanical working-power seemingly is heightened, as fewer albuminous masses are found in the stomach.

III. 1. The Carlsbad cure strongly reduces the acid reaction of the gastric juice, and employed to an excess is even capable to render the same alkaline, and to prevent its regeneration in spite of all remedial applications.

2. The gastric juice is similarly reduced,

and its acidification but little raised by the digestive capacity.

3. The gastric contents grow poorer in mucus and fermentation-organisms.

4. The Carlsbad water does not react so strongly on the gastric function at the termination of the cure as at its beginning, the stomach growing less susceptible to the applied stimulation.

5. The subjective gastric irritation is usually mitigated during the Carlsbad cure if the reactive susceptibility of the stomach is lowered. After too long a use of the Carlsbad water, however, peculiar dyspeptic conditions may set in.

The rest of the paper is of less practical importance to the American therapeutist, and is therefore omitted. As one of the first existing attempts at directing balneotherapeutic researches to clinical roads Jaworski's work is not without merit.

A NEW HÆMOSTATIC.

Dr. C. J. Rothe (*Pharmaceutische Post*, September 19, 1885) has made a number of experiments with the external application of the juice of the stinging nettle (*urtica dioica*) as a hæmostatic. The leaves, blossoms, and stalks of the young plant, gathered in the spring, are finely cut up, soaked for a week in sixty per cent. alcohol, then subjected to pressure and the fluid filtered. The filtrate forms a dark greenish-brown alcoholic fluid with a spicy odor and taste. When placed on absorbing cotton or carbolized and salicylic wool, and pressed on bleeding wounds, if no large vessels are divided the hemorrhage is rapidly arrested, especially in parenchymatous hemorrhage and that from small vessels. The blood appears to be by its contact converted into a soft tenacious clot, which forms in the divided vessels and capillaries, and so arrests the hemorrhage. In bleeding from the nose, a small piece of cotton soaked in the fluid is inserted into the nostril, and brought in contact with the bleeding spot, and may be maintained by a second dry plug of cotton. If the bleeding is at once arrested this application may be now removed, but if it is not immediately successful, after a few moments it should be replaced by a fresh application. This change is, however, seldom necessary, and the author states that out of several hundred cases he is yet to meet one where the hemorrhage is not arrested within half an hour. This new hæmostatic solution possesses the advantage over the solution of the sesquichloride of iron in that it avoids the formation of crumbly and broken-down clots.

ENTERORAPHY WITH THE EMPLOYMENT OF A NEW FORM OF SUTURE.

All the various forms of intestinal suture are open to some form of objection. Mr. E. Stanmore Bishop believes, however (*British Med. Journ.*, August 29, 1885), that the following method unites the advantages and avoids the drawbacks of all.

The intestine being secured on each side of the portion on which it is intended to operate by a clamp, the portion to be removed is cut away with scissors, along with a triangular piece of the mesentery; and the mesenteric vessels are ligatured. This is carefully done over a flat carbolized sponge; the ends left are then thoroughly cleansed and approximated; and, a fresh sponge having been placed beneath, the mesentery is brought together by a few catgut sutures. A small round straight needle (Bartlett's No. 12) is then threaded with fine Chinese twist or silk. The needle is placed exactly in the centre of the thread, which, when double, should be about eighty centimetres long. Then, with dressing-forceps, the lower edge of each side is seized, and the needle passed through the base of the fold thus formed, from right to left, as near to the mesentery as possible; the double thread is then drawn through, until six centimetres remain on the right side. One of the threads on the left side is then cut six centimetres long. The needle is then passed from left to right through the same fold, at a distance of twenty millimetres from the first puncture. Two free ends and a loop remain on the left side; two free ends, and two connected with the needle, on the right. By gently drawing upon the loop, one of each of the last two pairs are seen to move; these are then drawn up so as to bury the loop in the mucous membrane on the left side, and are knotted with a reef-knot on the right; the two ends are then cut off close to the knot. The free thread left in the first puncture is now drawn under the free extremities of the upper bars of the clamp, so as to be out of the way, and is reserved for the latter part of the operation. The needle is now carried back again from right to left through the base of the fold, and a similar loop is thus formed, this time on the right, and knotted on the left. In this way, as the suture progresses, a series of loops, consisting each of a single thread tied alternately on the right and left sides, is formed; the

threads passing through the same punctures as those of their neighbors on each side. It is thus rendered impossible that any part of the intestinal circumference shall be left unguarded, except the minute openings made by the needle and filled by the threads. As every one knows, the mucous membrane swells so easily on injury that it may safely be trusted to prevent any extravasation at these points. Besides, as the stitch is made, it draws in the serous membrane; so that, when finished, the threads are really inside the remade lumen of the intestine. Moreover, the knots are all inside.

Mr. Bishop prefers, when half the circumference of the bowel is united,—having finished the floor, so to speak,—to take a fresh needle and thread, and, tying one end to one of the free ends of the first thread, which, it will be remembered, was left behind, to commence again from the mesenteric border, and begin the roof from that point, so always working towards oneself. On drawing up the loop which this forms, care must be taken to bring the knot in its centre directly opposite the middle of the portion of wall included.

On finishing the floor, too, a free thread will always be left. This is taken advantage of in finishing the entire suture, for the last loop is made by tying together the two free ends on one side. The loop thus formed is then drawn up on the other side, folding in the serous coats of both sides; and, the knot being made, the two threads left are cut off close, the bowel becoming absolutely closed.

LANTANINE, A NEW ALKALOID.

Dr. Buisa, physician to the Central Hospital of Lima, publishes in *El Cambo Farmaceutico* a description of a new alkaloid, lantanine, discovered by Dr. Negreta in the sagrata, family *verbinacæ*, species *lantana Braziliensis*. Dr. Buisa has employed the tincture of this plant as an antipyretic with very satisfactory results, and as its bitterness was so extreme, even in the syrup or the wine, as to almost prevent its use, he requested Dr. Negreta to try and find a more pleasant pharmaceutical preparation. The experiments which he made with this end in view resulted in the discovery of the active principle to which its antipyretic effects are due. This substance or alkaloid, which he terms lantanine, has a moderating effect on the circulation, and seems to slow nutritive changes, at the same time lowering the temperature. It is tolerated by the most sensitive stomach. Intermittent fevers which prove rebellious to the use of quinine yield to 30 grains of lantanine. In order to reduce the temperature in febrile conditions, he employed it in doses of 15 to 20 grains every twenty-four hours, in pills of 1½ grains each. In intermittent fevers it should be administered after the access of the fever. In ninety-five per cent. of the cases it will succeed in producing a cure.—*Les Nouveaux Remèdes*, September 15, 1885.

COCAINE IN HAY FEVER.

Dr. G. H. Simmons, of Lincoln, Neb., has used cocaine for the relief of hay fever with marked success in several instances (*Medical Record*, Sept. 19, 1885). He relates the following case: "A farmer came into my office about three weeks ago, and, in a discouraged manner, asked me if there was nothing I could give him to relieve him of that terrible suffering and annoyance. His eyes were bloodshot, and his looks showed that he suffered all that he claimed to. Every little while he would have an attack of sneezing, which lasted three or four minutes, after which there would be profuse perspiration. He complained of great shortness of breath, exhaustion, and dimness of sight. There was intense itching of the nares, frontal headache, and severe pain in the eyes. It was the eye-trouble that suggested cocaine to my mind, and as I had only a few minutes before been using a two per cent. solution in a case of cystitis (and with success), I without hesitancy concluded to try it in this case. I dropped 2 or 3 minims of the solution into each eye, and the effect was almost miraculous. I then with a camel's-hair pencil applied a few drops to each nostril and well back into the posterior nares. The relief was immediate and complete. I gave my patient 2 drachms of the solution, and instructed him how to use it. I saw him again in ten days, and his praises in favor of the remedy were very profuse. He had used it about three times a day, and thus kept off all symptoms of his annual trouble. It was the first time, he said, for years that he had been free from it during the latter part of July and the first two or three weeks of August. A second case in which the same remedy was used was hardly as severe, but the relief was just as complete and satisfactory. The patient is a married lady, who has never found relief before without going either to the lakes or to the mountains. In this case I used a four per cent. solution." Dr. Simmons has also employed cocaine in a

five per cent. solution in equal parts of vaseline and castor-oil, as recommended by Dr. Gelston, of Limerick. He was successful, but nevertheless prefers the simple aqueous solution. He notes that Mr. John Watson, of London, has obtained relief in his own case by the use of tablets of cocaine inserted into each nostril.

THE INDICATIONS FOR THE CÆSAREAN SECTION.

Dr. Adolf Manasse, of Berlin, recently gathered in an inaugural essay (August 5, 1885) some very valuable material as to the proper indications for the Cæsarean section in labor. The obstetrical clinic of Prof. Gusserow in Berlin, which furnished the clinical material for Manasse's observations, is regarded as one of the most favorable for the purpose. The essay contains such a number of interesting and useful matters that we do not deem it amiss to briefly represent in the Therapeutic Gazette even what, strictly speaking, does not belong to the therapeutic domain.

The history of the Cæsarean section on dead women is exceedingly old, as the operation is mentioned in the Talmud (the old law of the Hebrews), in the Grecian mythology, and in the laws of Numa Pompilius, the second king of Rome. The latter forbade the burying of a woman in the last months of pregnancy, or of one dying during labor, without the delivery having taken place previously. This law has been incorporated into the majority of modern laws, and is this day yet essentially valid in many countries.

As children rarely survive when extracted more than ten minutes after the death of the mother, the success of the Cæsarean section post-mortem is very rare. After the death of the mother has actually taken place the child grows rapidly asphyctic, and this all the sooner the more mature the child is. Still, the cardiac energy of the child may, even after asphyxia has set in, sustain itself for some time; hence it is possible, through an appropriate treatment of the asphyxia of the excised child, to save the latter. Thus Breslau excised a child which lived a few hours only, fifteen minutes after the death of its mother; Pingler another, which survived wholly, after twenty-three minutes. The same success was obtained by others. Hoscheck operated on a woman who died in the last stage of consumption, and extracted an apparently dead child, which was resuscitated by artificial respiration.

After Prunhuber's interesting statistics of five hundred and ten cases of the Cæsarean section, ninety-one children were extracted alive, of which only twenty-five wholly survived; hence only five per cent. were saved.

Experimental and clinical observations (especially those of Runge) proved that the heightened temperature of the mother, transmitted to the child, was the principal causative agency in the stated scarcity of the operative success.

The temperature of the fœtus being *per se* higher than that of its mother, the former will evidently reach the thermal limit of viability sooner, or, in other words, will succumb sooner than the latter. Hence there will be little chance of success for an operation when the mother dies from heat or sunstroke.

In 1871, Loewenhardt advised, in his obstetrical aphorisms, to save what could be saved,—*i.e.*, to operate even when life in the mother be not yet extinct. The two conditions, *sine quâ non*, for the operation of the Cæsarean section are:

1. The life of the child must be unquestionable.

2. The illness of the mother must be of a kind which renders her survival a matter of impossibility.

The first condition can be infallibly ascertained by the cardiac sounds. The second, however, may often be doubtful, and here the postponing of the operation until the mother has expired will often be prudent. Manasse mentions the famous forensic case of Fischer and consultants, who were sentenced to penal servitude of two years and permanent inability to practise their profession, though finally pronounced not guilty by the medical deputation, and set free. It was a case of eclampsia in which neither fœtal heart-sounds nor movement were ascertainable; the operation resulted in finding a dead child, and survival of the mother for sixteen hours.

The experience of a number of cases in Prof. Gusserow's clinic, in which the Cæsarean section was either planned or executed, may be thus epitomized:

1. The maxim, ordinarily valid in obstetrical practice, that the life of the mother is of higher consideration than that of the child, is inadmissible when the mother is moribund.

2. The Cæsarean section *post-mortem* is but very rarely successful, and only when executed immediately after the death of the mother.

3. In maternal affections which prove fatal under an elevation of temperature, no success is to be anticipated from an operation.

4. The practitioner called to a dying woman, bearing a living child, is bound to deliver the woman, *ante-mortem*, by the Cæsarean section.

5. Conditions requisite for the operation are:

a. The diagnosis of a maternal affection rendering her survival hopeless.

b. The certain knowledge of the child's life.

6. In acute febrile affections, which greatly obscure a proper prognosis, the operation *ante-mortem* is not advisable.

A NEW INSTRUMENT FOR THE REMOVAL OF POLYPI.

There has been perhaps as much ingenuity displayed in the construction of surgical instruments and appliances as in any other department of mechanics, though it is frequently the case that novelty is the one merit possessed by the new invention. In the *Southern Practitioner*, October, 1885, Dr. J. W. Penn described an instrument which he extemporized for the removal of polypi from the nose. The instrument consisted of a small écraseur made by cutting off about eight inches of the shaft of a heavy silver male catheter, and fastening upon one extremity a curved end-piece of white metal resembling the hilt of a small pistol. He then cut a slot at the junction of the end-piece on the tube and drilled a hole through the walls at each side, through which a pin resembling a violin-pin or a fiddle-screw was passed. He then drilled two very small holes through the pin to receive the "E" string of a violin, which was doubled and passed through the opposite end of the tube. The advantages which Dr. Penn claims for this instrument are: it may be manufactured by any one; it has sufficient strength, is at the same time light and easily manipulated; will reach to any desired depth; is perfectly simple in its structure and operation; and the catgut is concealed in a tube, so that it cannot pinch or injure the tissues with which it comes in contact.

TREATMENT OF CHOREA.

From a clinical lecture of Dr. Gilbert, held in the Hôpital des Enfants-Malades in Paris (*Progrès Médicale*, No. 24, p. 480), on the therapeutics of chorea, we abstract some practically important matters.

The routine treatment of all choreic patients at the mentioned hospital consists in the systematical exhibition of chloral-hydrate and the application of the wet cloth. The reason why chloral fails in the hands of so many practitioners is not to be sought in the drug itself, but in the faulty method of its administration. In two little patients some time ago, Gilbert gave 15 grains of chloral every quarter of an hour until sleep was produced, and when the children awoke the same dose was again administered. In this manner a sleep was obtained which was in reality but twice interrupted in twenty-four hours, just the time needed for two meals. After four or five days the drug has to be stopped, as it would be dangerous to prolong this profound and continuous sleep. The results obtained by this method of treatment compared very favorably with those of other clinicians, who usually contented themselves with sufficiently large doses to produce sleep once or twice daily, and rarely pushed the medication beyond a couple of days. At present Gilbert gives chloral systematically three times daily, and for a period of two weeks to two months, until a cure is perfected, without ever having met with a single accident. A rubeoloid or erythematous eruption, unaccompanied by constitutional manifestations, has occasionally been noted, but disappeared spontaneously in twenty-four hours, even when the medication with chloral was continued.

This uniform method is intended to ameliorate the graver symptoms, and to procure a prolonged sleep. A choreic patient ought not only to sleep at night, but also once or twice during the day, preferably after meal-time. The question of dose is one of great importance. Gilbert gives, in a patient beyond ten years of age, habitually 60 grains *pro dies*,—15 grains in the morning, 15 at noon, and 30 at night. This form of medication is to be continued until the choreic agitation is completely under control. In order to disguise the disagreeable taste of the drug, the confection of chloral recommends itself, especially in the case of children. The confection is prepared by taking a watery concentrated solution of chloral and currant-jelly.

It is only in the graver form of chorea, in which chloral alone does not suffice to suppress the nervous and muscular excitation, that the wet cloth comes in as a potent adjuvant to the drug. As to its application, cold water solely is to be employed. The cloth is dipped into it, moderately expressed, and the patient laid upon a mattress covered with a rubber-cloth. The body of the patient is then tightly wrapped up in a blanket and vigorously rubbed from the head towards the feet. After a couple of minutes, when reaction has taken place and

the little patient has commenced to get warm, it is to be wrapped up in several woollen blankets without removing the wet sheet, leaving just the head free. In this sort of a steam-bath, then, the child is to remain on its bed for about half an hour, when reaction will have fully set in and done its intended work.

The effects of this procedure are invariably of the most excellent nature; the child feels calm and composed, and not rarely falls into a quiet and prolonged sleep, from which it awakens more tranquil than ever.

As these are the remarks of a well-known clinician with an extensive practice with choreic children, his method of treatment lays claim to our confidence, and invites a trial.

THE FLUID EXTRACT OF CAMELLIA AND HYOSCINE HYDROBROMATE IN THE TREATMENT OF THE INSANE.

The fluid extract of camellia or tea has within a few months been offered the profession by DR. E. R. SQUIBB to take the place of guarana and coca. He stated that the testimony in regard to the effect of tea, coffee, Paraguay tea, and kola nuts is all of a similar character to that upon coca. Each of these substances seems to have come into use independently in widely-separated countries to produce the same effects, viz., to refresh, renew, or sustain the physical or mental organism; and it was a curious surprise to find, after they had been long used, that, although each came from a different natural order of plants, the same active principle, viz., caffeine, could be extracted in different proportions from all. It is even more curious to find that for centuries a plant, viz., coca, yielding a different principle, has been in use for a similar purpose, the effects of which differ but little from caffeine, simply producing a similar physiological effect in much smaller doses. Comparing the powers of these drugs in their tendency to counteract sleep or promote wakefulness, Dr. Squibb found that 3 grains of caffeine were equal to 3 fluidrachms of the extract of coca, and to 70 minims of the fluid extract of camellia. These 70 minims of the latter extract equal 70 grains of tea, and this yields a little over 2 grains of caffeine. In the *American Journal of Insanity* DR. JUDSON B. ANDREWS reports a long series of experiments which he has made with the fluid extract of camellia and hyoscine hydrobromate. In the experiments on the first of these drugs a remarkable uniformity of action was noticed, the pulse being uniformly decreased from ten to twenty-four beats under the influence of varying doses, while the force and volume of the arterial tension was invariably increased. The full influence of the remedy was experienced in from one-half to one hour after administration. After remaining stationary for about half an hour the pulse began to increase in frequency, and regained its normal condition in about another half-hour, the effect disappearing in about three hours after taking it. It was used clinically in a number of cases as a heart-tonic with favorable results.

Dr. Andrews also tested hyoscine hydrobromate as a hypnotic. In these experiments he found that the hyoscine has a marked effect upon the circulation in reducing the frequency of the pulse, the pulse being reduced fourteen beats with the dose of $\frac{1}{100}$ of a grain, and in another case twenty-four beats under the use of $\frac{1}{100}$ of a grain. This decrease was uniformly present in all the experiments. There was little change, however, in the character of the pulse, save that which was due to the decrease in the number. There was no nausea or disturbance of the stomach, no headache or other unpleasant effects. The only complaint was from the dryness of the fauces and disturbance of vision. Dr. Andrews reports a number of cases of various forms of insanity in which this drug was employed in doses varying from the $\frac{1}{200}$ to the $\frac{1}{100}$ of a grain. The smaller doses in nearly all instances served to control restlessness and muscular agitation, while doses of $\frac{1}{100}$ of a grain were very efficient in producing sleep at night. It was given by the mouth in twenty of the cases, while in two it was used hypodermically, in one case being followed by painful abscesses. The physiological effect of the drug was experienced in from fifteen minutes to two hours, but the average time was less than one hour. The pupils were dilated in most of the cases, but the disturbance of vision and the dryness of the fauces, or the inhibition of muscular movements, was only complained of in the two cases mentioned, but in many of them there was such a degree of mental disturbance that the absence of complaint is of little value in arriving at a knowledge of the existence of these unpleasant effects. There was no nausea, and in the few cases in which it was given sufficiently long to produce the results, there was no disturbance of the appetite with consequent loss of flesh, as is sometimes experienced in the continued use of hyosciamine. There was also less disturbance of the vaso-

motor system than is found in the use of that alkaloid. It would seem from the experiments that it is a powerful sedative to both the cerebral and spinal systems, and from the success attending its use, and for the reason stated above, it would seem justly entitled to a high position in the list of hypnotic remedies.

EPILEPSY CAUSED BY DENTAL CARIES.

DR. LIEBERT reports, in the *Deutsche Medicinische Wochenschrift* of September 10, 1885, three cases of epilepsy (one in its initiatory stage) which all showed a remarkable aura, viz., one beginning with a cramp or involuntary motions of the tongue. All three cases were promptly and permanently cured by the extraction of a decayed tooth, which in every instance had been the source of irritation. Liebert recommends, consequently, a careful inspection of the teeth in all cases of epilepsy which are characterized by this peculiarity in regard to their aura.

EPITHELIOMA OF THE EYELID REMOVED BY APPLICATIONS OF BENZOL.

At a recent meeting of the Brooklyn Pathological Society DR. MATTHEWSON reported the following history of a case: An Irish laborer, 50 years old, was first seen October 31, 1883, when he had a growth on the right lower lid, projecting two-thirds of an inch, with an ulcerated surface. It had first been noticed as a warty excrescence a year or two before, and it had lately begun to grow rapidly. Microscopical examination by Dr. W. H. Bates showed it to be clearly an epithelioma. At first the treatment consisted in dusting the granulating surface with calomel; afterward (at the suggestion of Dr. Bates, who had records of two cases of epithelioma treated successfully, in his own practice, with the agent) in applications of benzol. After about three months' use of these remedies, applied three or four times a week, the growth had completely disappeared, leaving a smooth, depressed cicatrix. On the 1st of March, 1885, the man came back, with the history of a small ulcerating spot having appeared some six months before at the outer edge of the cicatrix. This was extending rapidly, but quickly began to contract under renewed applications of the same remedies, and was much reduced in size when the patient was presented at the April meeting of the New York Ophthalmological Society. On the 1st of May, when the patient left town, it was scarcely noticeable. On the 8th of July the man appeared again, with a considerable increase in the size of the ulcerating surface, but it had again yielded promptly to the applications. The benzol was brushed over the ulceration and the adjacent surface after they had been carefully wiped, and calomel was then dusted on. The applications were made from two to four times a week.—*New York Med. Journ.*, September 26, 1885.

LIEBIG'S EXTRACT OF MEAT.

The value of this world-renowned preparation has so frequently been either overrated or again questioned altogether, that the remarks of R. B. LEHMANN on this subject appearing in the *Archiv für Hygiene*, 1885, 249–290, will be read with interest. The following represent their summary: Some time ago Remmerich created a widespread surprise by announcing that Liebig's extract of meat partook of a poisonous nature. The latter he referred to the presence of potassium salts in the extract, and demonstrated the identity of the potassium intoxication in general, and the symptoms produced by Liebig's extract. Experiments with the extract instituted on various animals, and especially on rabbits, showed that comparatively minute quantities of the extract (two teaspoonfuls of a concentrated solution) sufficed to kill the latter by cardiac paralysis. Carnivorous animals being likewise subject to the toxic action of the extract, Remmerich concluded that in man a cardiac paralysis may likewise ensue, and that, of course, such an issue would be all the more possible in ailing, debilitated, or juvenile individuals. Although these seemingly improbable objections to Liebig's extract were almost wholly removed by the researches of Bunge, the French scientist persisted in disparaging this famous German article. And to refute all opposition on a scientific ground, Lehmann instituted exhaustive investigations, and concluded:

1. That neither extract of meat (*i.e.*, meat-broth) nor the salts of potassium ingested once by a healthy person, even in a larger dose, exerted any specific influence on the frequency, magnitude, or regularity of the pulse.

2. That the increase of cardiac pressure noted by Remmerich as following upon the ingestion of the broth and extract, referred probably to a reflex augmentation of the pulse, originating from the digestive tract, and proven respecting all salts, and not to any specific potassium action.

3. That in rats and cats even excessive quantities of the extract (one per cent. of the body-weight) did not produce any deleterious effects, no matter whether the animals were kept hungry, poorly or well nourished.

4. In two infants, greatly reduced by malnutrition and confinement, the same negative results were obtained.

5. That Liebig's extract of meat possessed no especial value as an article of nutrition, though, like all beef-teas, it acts as a digestive stimulant.

THE TREATMENT OF TÆNIA BY CHLOROFORM.

Dr. W. H. Bennett, of Brooklyn, N. Y., writes as follows to the *Medical Record* for Sept. 19, 1885: "As there has been some considerable discussion during the past year regarding the efficacy of chloroform in either killing or completely anæsthetizing tapeworm, so that its expulsion is rendered an easy matter by the simultaneous or after-administration of a brisk purgative, I beg to call attention to three cases where the drug mentioned was primarily successful in bringing about this result.

"The first case was that of a girl, aged 15, whom I had previously dosed with most every known tænicide, with the result each time of bringing away a portion of the worm, but always minus the head. On July 10, 1884, I administered half a drachm of chloroform in 2 ounces of mucilage, and in half an hour afterward 1 ounce of castor-oil. At about noon the bowels moved freely, and the parasite was expelled entire.

"Case No. 2 was an adult, aged 52. He had also been subjected to treatment by male fern and other drugs, but unsuccessfully. On Jan. 25, 1885, I ordered him half a drachm of chloroform, as above mentioned, followed by an ounce of castor-oil, and within four hours the whole worm was passed.

"Case No. 3 had suffered from the presence of a tænia for a year and a half. Had tried many remedies without avail. I gave him the same quantity of chloroform, but combined the castor-oil with it. The result was entirely satisfactory.

"All three patients have remained well since. In each case the patient was allowed to eat a light supper, and the medicine was given before the breakfast-hour in the morning, no food being allowed till the bowels moved. The only disagreeable symptoms caused by the chloroform were in one case slight nausea, and in all a trifling sense of intoxication, with slight headache and somnolence, which passed off in a couple of hours after the oil operated. No further discomfort was complained of.

"It will be noticed that half a drachm was the largest quantity of chloroform used. In case this should not prove sufficient, I would prefer, in subjecting the patient to treatment at a subsequent time, to administer a second half-drachm some twenty minutes or half an hour after the first dose of a like amount of chloroform, or even several subsequent doses of a few drops each, at intervals of some minutes, than to give more than the maximum quantity here mentioned. By this latter method the effect on the worm might be equally as great, while the action of the drug on the heart would not be as likely to produce the alarming symptoms which have been reported where doses of one drachm or more have been given."

THERAPEUTICS OF WHOOPING-COUGH.

Whooping-cough is usually classed among those affections in which palliative measures rather than curative ones are indicated; in other words, the affection is usually regarded as incurable. The positive assertion of Dr. Sauerhering, of Stettin, in the *Deutsche Medicinische Wochenschrift* of September 10, 1885, that he has cured this affection in from fifteen to twenty days, and that in a ten years' practice his failures were almost none, is, consequently, well suited to arrest our attention. Our surprise to learn that the lauded remedy is quinine is very properly met by Sauerhering's statement, that in the treatment of disease the mode of administration of a remedy is no less consequential and important than the selection of the remedy itself. Thus the salts of mercury are frequently useless, in the hands of some practitioners, against syphilis, the bromide of potassium against epilepsy, or the sulphate of quinine against malaria, while the identical drugs, exhibited in a different manner by other practitioners, promptly relieve the respective ailments. Sauerhering prescribes quinine in whooping-cough in not too large doses, but at definite intervals, and continued for a certain length of time.

Infants receive, *pro dosi*, ½ to 1 grain; children in the second year of life, 1½ gr.; in the third and fourth, 1½ to 2 gr.; in the fifth and six, 2 to 3 gr.; in the seventh and eighth, 3 to 3½ gr.; adults, 7½ gr. These doses, of course, are subject to modifications in correspondence to special conditions of consti-

tution, physical development, or other circumstances. It is best to prescribe ten doses at once, in powder form, and to order one powder to be taken three times daily,—*i.e.*,

℞ Quininæ sulphatis, gr. iss;
Sacchar. alb., gr. viiss. M.
F. pulv. div. cht. No. 10. S.—One powder three times daily.

These ten doses suffice for three days, then a pause of three days is to be made, and ten more powders are to be given in the same manner. Then the same pause and successive administration of the medicine ensues, but now for the last time, as the whooping-cough is usually cured by these thirty powders, taken in sixteen days, including the pauses. Fresh air is to be supplied as freely as possible; excitement, dry or crumbling food are to be strictly avoided. The following table will represent the mode of administration still clearer:

August 11	One powder in the evening.
" 12	Three times daily one powder.
" 13	First prescription.
" 14	
" 15	First pause.
" 16	One powder in the evening.
" 17	
" 18	Three times daily one powder.
" 19	Second prescription.
" 20	
" 21	Second pause.
" 22	One powder in the evening.
" 23	
" 24	Three times daily one powder.
" 25	Third prescription.
" 26	

After the use of the first ten powders the vomiting will be found to have ceased, though the reduction in the number of paroxysms is only slight. Both intensity and number of attacks decrease after the use of the second series of powders, while vomiting is wholly suppressed, the bloatedness of face and the ecchymosis of the conjunctiva disappear. Even if the affection should seem to have been relieved or cured before the above treatment is completed, it is necessary to carry the latter out with strict adherence to the indicated plan.

Though children generally at first refuse to take the bitter powder, they soon learn to take it, and, as our author remarks, with less repugnance even than adults. The powder is best dissolved in sweetened water, or given in chocolate, which almost completely disguises its bitter taste.

As to the therapeutic rationale of this treatment, Sauerhering thinks that quinine acts in whooping-cough similarly as in the malarial affections, viz., by virtue of its antibacterial properties. Besides, it is quite likely that the favorable impression on the reflex centres by the drug (as in the case of the narcotics or of bromide of potassium) is one of the factors which render quinine a cure for whooping-cough. The digestive tract remaining unimpaired in the experience of our author, we feel assured that his treatment will receive a fair trial from American practitioners.

THE ACTION OF HYDROBROMATE OF HYOSCINE.

In the October number of the GAZETTE we published the conclusions arrived at by Drs. Peterson and Langdon as to the value of hydrobromate of hyoscine in the treatment of the insane. This paper has called forth a reply from DR. ARCHIBALD CHURCH (*Med. Record*, October 10, 1885), who believes that the drug has more usefulness than the conclusions arrived at would seem to indicate. In his experience in sthenic and acute conditions, or violent manifestations arising in the course of chronic insanity, it has notably and promptly lessened the excitement, and in the frenzy of melancholia has mitigated the outbreak in cases where it has been tried in this hospital. While not doubting that its continued administration in small and often-repeated doses will disarrange alimentation—and what powerful drug does not?—it has yet rendered signal service in tolerably full doses, $\frac{1}{40}$ grain, given when specially indicated, without producing any untoward symptoms whatever. By watching its action upon others and upon himself, in varying doses, it did not seem advisable to give it in a more routine manner than one does morphine or atropine in parallel cases; and so far more than two doses of $\frac{1}{40}$ grain have not been used in twenty-four hours.

By careful sphygmographic observations it is clearly shown that minute doses—$\frac{1}{100}$ to $\frac{1}{100}$ grain—of the hydrobromate are stimulant of cardiac action, and thereby of the mental processes and attendant manifestations, not only among the insane but in a condition of health. With a larger dose—$\frac{1}{40}$ to $\frac{1}{30}$ grain—this also is the primary result; but as more of the medicament comes into operation it is followed by a slowing of the pulse-rate and by a diminution of the cardiac curve of the tracing, sometimes to such an extent that a bruit of dicrotism appears. A

feeling of fatigue, or rather of comfortable weariness, is now associated, and one gives up readily to feelings of drowsiness, sleep following naturally. After using the drug in $\frac{1}{40}$-grain doses for from six to ten consecutive nights, with an average of six hours' sleep, for instance, its discontinuance has been followed, but only after several nights, by wakefulness, which again gave way to the remedy. In some instances of confirmed insomnia, or rather of often-disturbed sleep, after securing a few nights' good rest the patient has rested fairly well, the habit of waking at certain times being broken, and in general the effect of the drug is lasting. When given by the mouth, as was pointed out in the article above referred to, its action is slow, and there is considerable variability as to the amount required by different patients. Although no notable depression has come under observation from the use of the drug in such doses as are indicated above, it no doubt is capable of producing stupor, just as does hyoscyamine, which doubtless in the amorphous form contains it largely, but which is associated with little danger, according to a recent writer in the London *Lancet*, who gave unhesitatingly ½ grain, and even ¾ grain of Merck's preparation, producing coma, etc.

It may be not uninteresting to note that hyoscine is a very active mydriatic. It was found that two drops of a solution, $\frac{1}{10}$ grain to the ounce of distilled water, produced complete dilatation of the pupil and paralysis of the accommodatory muscles in about five minutes, and that it was more active to stretch the adhesions in a case of posterior synechia than the repeated instillation of a solution of atropinæ sulphatis 3 grains to the ounce. The mydriasis so produced is very persistent, lasting from five to ten days, and the use of the solution is not attended, as far as observed, with any conjunctival irritation, which will suggest its value to oculists where the long-continued action of a mydriatic is required.

ON BROMIDE OF CAMPHOR.

As this drug has hitherto been but little used in this country, it will interest our readers to review its therapeutic aspects as appearing in the *Progrès Médicale*, No. 24, p. 488.

The drug was first introduced into the field of practice in 1871, and possesses, in spite of its comparative youth, an ample literature, of which we will only refer to the most recent and therapeutically important works.

Not long ago Valenti y Vivo called attention to the physiological antagonism existing between the monobromide of camphor and strychnine, a fact which has a toxicological value.

Lienhart contested the hypnotic virtue of the drug which Hammond upheld. The latter physician cited a case of delirium tremens in which he employed this remedy. After the eighth dose, Hammond says, the patient slept for four hours. After awaking he obtained the remedy again, and after six doses he slept for six hours.

Warren, of New York, as long as ten years ago used the bromide of camphor with good results in typhoid fever, and declared that it exercised an actual influence over temperature and circulation.

Petrowitz employed the drug in numerous cases of hysteria, chorea, cardiac palpitations, and nocturnal erections with satisfactory results. He mentions the case of a medical student suffering from nocturnal erections and following pollutions, who was treated with bromide of potassium without success, but was promptly relieved by bromide of camphor.

Gubler claimed to have obtained remarkable sedative effects with capsules of bromide of camphor in genital excitation, and especially in blennorrhagic priapism. Camphor, says this author, does not ordinarily traverse the kidneys, but in the form of the monobromide it can be made to do so.

Marm employed the drug in mental diseases, and more recently Hammond in hysteria in doses of 15 to 25 centigr. (2–3 grains), given every two hours after the paroxysm. In the latter affection it is especially suitable when ether and chloroform are contraindicated. Nothnagel and Rossbach recommended the remedy against nervous excitation of the cardiac and genital systems. Fonssagrives, reviewing the various therapeutic uses of the drug, calls it an antispasmodic, an anaphrodisiac, and a general nervous sedative.

Rolland and Mills furnish further testimony to the useful services of the drug in affections of the nervous system. Quite recently it has also been tried in chorea with promising results.

PREVENTION OF LACERATION OF THE PERINEUM.

In a paper read before a recent meeting of the Rhode Island Medical Society (*Medical News*, October 3, 1885) by Dr. Herbert Terry, of Providence, several noted author-

ities were quoted on the cause of this laceration. Dr. McCaw, of Providence, had suggested the theory that it might be caused by contraction of the perineal muscles brought on by the pain from distention.

The writer thought that in his own cases the accident had occurred oftenest during the passage of the shoulders, but perhaps as often just at the last moment when the perineum was distended over the lower part of the face. It had also seemed more frequent in case the head was considerably elongated. His conclusion was that laceration is not so often due merely to distention, but to the shape of and direction taken by the distending part.

Dr. Terry explained as follows: "When the progress of the head is stopped by the nape of the neck catching under the arch of the pubes, further pains act upon the head as upon a lever of the third class with the fulcrum at the occiput. The face does not emerge, as the occiput, in a direction perpendicular to the plane of the vaginal orifice. It hooks up the perineum, as it were, from behind and presses upon it, not evenly over its whole surface, as did the round occiput, but over a limited area and in a direction more nearly perpendicular to the surface of the perineum. The more elongated the head, the more evident does this lever-like action become. The same conditions hold true in the passage of the perineal shoulder. The narrow presenting part has often seemed to come directly through the perineum without distending it too near its maximum. I am convinced that the parts often begin to tear along the vaginal wall. In one case the rent was distinctly felt after the head had receded and the perineum had contracted." For the prevention of laceration, the writer mentioned the use of lubricants when the parts had become stiff and dry in protracted cases, and also repressing the head during a pain by means of the fingers of the left hand carried over the side and between the legs, while, during the interval, the head is slowly urged forward by one or two fingers of the right hand acting through the recto-vaginal wall.

The writer then said, "Acting upon the idea spoken of above, that the lacerations often occurred from the shape and direction of the presenting part, I have used in the last three cases of primiparæ that I have attended, an appliance made for me at one of the rubber-stores. It consists of a piece of steel three-quarters of an inch wide and eight and one-quarter inches long, embedded between two strips of soft rubber, vulcanized together, and projecting in every direction three-quarters of an inch beyond the edge of the piece of steel. This makes a plate nine and three-quarters inches long, two and one-quarter inches wide, and a little less than one-sixteenth of an inch in thickness. It is perfectly flexible, and cannot injure the soft parts of the mother, while the steel shank gives sufficient firmness to the centre to distribute the pressure more evenly over the perineum. It does not interfere perceptibly with the relaxation of the parts by dilatation of the anal orifice, nor does it seem to retard the passage of the child."

Two of the three cases in which the appliance had been tried were said not to be test cases. The remaining case was described as follows: "The perineum I found was one which you will recognize as prone to tear,—short, thick, rigid, and apparently set back from the other parts of the vulva. During the course of the labor the head became wedged, apparently between the two tuberosities of the ischia, and it was quite difficult to introduce the forceps through the vulva. After the head had been brought down so as slightly to distend the perineum, the instrument described was well oiled and slipped in between it and the head. The forceps were removed and the head was born after a few pains. During the pains the head was repressed as much as possible, while during the intervals it was carefully and gradually pushed forward by two fingers in the rectum. The orbits, mouth, and eventually the chin were felt through the soft rubber and recto-vaginal wall, and were successively acted upon. Upon the birth of the child, the parts did not, as usual, contract forcibly around the child's neck and in front of the shoulders, but were already somewhat distended by the elasticity of the steel shank, and the pressure was distributed over the whole, instead of being limited to the portion well back in contact with the point of the shoulder.

"In cases where the head is born last, the body of the child can be carried well forward, and the mouth brought to the vulva, so that air may be obtained, and then plenty of time taken in the delivery of the head. When rapid delivery is necessary, drawing the perineum forward, as recommended by Dr. Goodell, or carrying it forward by Playfair's method, will, probably, lessen the degree of laceration. In other positions of the head than occiput anterior, a long diameter is presented at the vulva, and rupture is likely to occur from mere distention. Deliberation in this delivery is of the greatest importance, and a liberal supply of

ether or chloroform will reduce the risks of laceration. In the use of forceps it is rarely necessary more than fairly to distend the perineum before removing them; and it seems to me that the risks of laceration are much increased by not doing so. Very many consider, however, that the head may be delivered with forceps with greater safety to the perineum, because the head is held well forward under the arch of the pubis."

Dr. D. H. Batchelder said he did not believe much in the efficacy of supporting the perineum. It had for many years been his practice, in case of an unyielding perineum, to inject per rectum, gr. ½ or 1 of antimony in tincture of lobelia and starch-water, which will cause the parts to yield in twelve or fifteen minutes. Out of three thousand seven hundred and eighty obstetrical cases, he had encountered only four cases of ruptured perineum. He thought much trouble in this direction came from the too early use of ergot or the forceps.

At the last meeting of the American Gynæcological Society, Dr. Thaddeus A. Reamy, of Cincinnati, read a paper on the same subject, also reported in the *Medical News* for October 3, 1885.

He referred to the various opinions which had been expressed on this subject. There is a general agreement as to the importance of preserving the perineum. In certain cases, however, from anatomical and pathological conditions, laceration is almost inevitable. He spoke of the various methods which had been proposed, dividing them into two general classes: those which aimed to support the perineum, and those which were used with the object of retarding the progress of the head. There is one class, numerically small, who believe that the perineum should be let alone. The method about to be described he had adopted several years ago, and it had given him much satisfaction. He was persuaded that he had saved many perinea through its use. It was recommended for primiparæ and others where the structures were greatly imperilled. During the early part of the second stage the patient is allowed to assume any position she prefers; but when the head begins to distend the perineum, the patient is placed across the bed, with the limbs in the lithotomy position, with the exception that the knees are kept close together. This is important. The limbs are held in this position by two assistants. A piece of muslin or a towel, ten inches wide and forty or fifty inches long, is carried around the buttocks of the patient and over the hemisphere produced by the bulging perineum, with the upper edge on a level with the fourchette, and the ends given to the assistants. They are instructed to make traction during the pain, in the manner that the accoucheur may direct. The bandage must be applied smoothly. The direction of the force may be made in any required direction. Care must, however, be taken that the pressure is equably distributed, and that the assistants do not simply pull on the middle or posterior part of the bandage, while the anterior portion is left lax.

In order to show that this procedure is based on good anatomical grounds, the speaker next referred to the anatomy of the perineum, illustrating his remarks with diagrams. According to the old descriptions of the anatomy of this region, it was considered that the muscular fibres decussated in the part between the vagina and rectum. Recent observations show that this is not the case, but that the fibres simply meet, and a laceration of the perineum divides no muscular fibres transversely, with the exception of those of the transverse perinei. The fibres are simply separated. When the sphincter ani is divided, its fibres are, of course, divided transversely. The perineum is prevented from lacerating by the protection afforded by the tissue below and the integument. The bandage used in the way described affords a supplementary perineum, as it were. By keeping the limbs in the position indicated, nature is able to supply tissue for the relaxation of the perineum. When the perineum is bulged, the lateral and posterior sulci disappear, and the perineum with the advancing head forms almost a hemisphere. The towel is in contact with every part of this hemisphere. The advance of the head may be retarded by making traction on the towel. Where it is accessible, a narrow bed may be used with advantage, the assistants taking their positions near the head of the patient.

The use of this bandage avoids any tendency to exciting expulsive efforts from reflex irritation of the perineum, as is sometimes seen where the fingers are used. It is comfortable to the patient, and does not cause more exposure than other methods. The bandage may be kept on until the shoulder is delivered, thus avoiding rupture from this cause. In order that this method shall be successful, it is important that every detail shall be carried out with painstaking care.

Should a rupture occur, the immediate operation should be resorted to.

ON COTOINE.

This drug was first isolated by Jabst, of Stuttgart, in 1875, and has recently found various therapeutic uses which deserve to be briefly discussed. According to PRIEBRAM it acts as an antiputrid and antizymotic, and consequently can be employed to check fermentation (*Progrès Médicale*, No. 24, p. 493). Burkart examined its physiological properties, and found that in doses of 1 gramme (15 grains) it showed no toxic effects on a rabbit. Given to man in doses of 10 to 20 centigr. (1½–3 grains), it was found to increase the appetite without producing any digestive disorders or constipation. It is insoluble in the gastric juice, but freely soluble in the intestinal juices, dilates the abdominal vessels, and produces a modification and regeneration of the physiological functions of the intestinal epithelium. Burkart also noted that it reduced the temperature and acted as an antisudorific; its elimination from the system takes place through the kidneys.

Therapeutically, it is chiefly used against diarrhœa, except in cases of intestinal ulceration, and in alcoholic and cirrhotic patients. In cholera and against night-sweats the drug has also, but with varying success, been employed.

THE TREATMENT OF DYSENTERY.

DR. THOMAS BUCKLER, of Baltimore (*Boston Med. and Surg. Journ.*, October 1, 1885), refers to a method of treatment which he believes may serve to reduce the mortality of this very serious disease.

The principle of this treatment consists in the use of wet, saline purgatives, whereby *the idiopathic dysentery is converted into a symptomatic diarrhœa.* The saline, acting on the exhalents, unloads the engorged glands, mucus ceases to be secreted, and a profuse watery discharge takes its place. To accomplish this, half an ounce of Rochelle salts—tart. potass.—and sodium, or a like quantity of Epsom salt (sulphate of magnesia), or Glauber's salts, sulphate of sodium, is sufficient. As soon as the action of the salt is over, give 20 drops of Sydenham's tincture of opium, 8 of black drops, or a grain of powdered opium. This usually closes the case. If, after the effect of the anodyne passes off, tormina, tenesmus, and the voiding of mucus from the bowels are renewed, then the remedies, as directed above, are to be repeated, and in forty-nine cases out of fifty nothing more is required to be done.

But where the vaso motor nerves are paralyzed by blood-poison, the mucous and sanguineous discharges, instead of stopping under salines, go on more profusely than before their use; and in rare cases, the tormina, tenesmus, and discharges become more active; the pulse gets small, frequent, and sometimes thready; the extremities become cool, as does also the sweaty surface of the trunk; the patient, often, in a squeaky voice, complains of great weakness, and, if the stools are examined, they will be found to be nothing less than the product of a "bloody flux," all, or nearly all, the mucus having disappeared from them.

In this emergency, a grain of pulv. nucis vomicæ may be given to a child, and 5 grains for an adult, with the best results. Dr. Buckler has never ventured to give more than 5 grains on two consecutive days. Strychnine, in this condition, does no good, being taken up from the stomach into the circulation; but given in the form of the powdered nut, the remedy gets down into the intestines, and the strychnine being slowly dissolved out, is used at the place where it is wanted.

In some cases the patient may be suddenly seized with slight chilliness, followed by tormina, tenesmus, and great weariness. The pulse small, feeble, and frequent; the skin cool, covered with an oily sort of sweat, and the stools, altogether the most characteristic sign of this peculiar form of dysentery, were mucus, having the exact color of hickory ashes. In this formidable condition, according to Dr. Buckler, nothing is required but to give 5 grains of capsicum every three hours. By the time, or before six of these pills have been taken, a profuse flow of bile will come away, changing entirely not only the character of the stools, from gray mucus to bile, but improving the condition of the patient so much that return of strength and convalescence are at once established.

There is still another form of disease commonly regarded as dysentery and treated for it, because the patients have sanguinolent stools, containing the coloring-matter of blood, but without a trace of mucus. Of these, Dr. Buckler has seen *five* cases, all of which were from malarial regions. The first, having some spots of purpura hæmorrhagica on different parts of his body, gave him the key to the treatment of it, and in all the others in which there was no sign of petechiæ or of subcutaneous extravasated blood to be found, except in two, there was icteric coloring of the skin and whites of the eyes. They all recovered rapidly under 10 grains of bicarbonate

of potassium, given every four hours, with the juice of limes or lemons, while effervescing, and potato paste for food. In other words, they took the usual remedies for purpura hæmorrhagica, and the allied disease, scurvy. If the jaundice in these cases is deep, they might also take, with advantage, at bedtime, 15 grains of benzoate of sodium, with 10 grains of the extract of taraxacum.

For dysentery solids are, as a rule, better than liquids,—properly cooked cold rice, boiled fish, and tender beef, mutton, or chicken, roasted, rather than ice-water, beef-tea, chicken and mutton broth, or milk.

Cases malarial in their origin should be removed and kept supplied with pure, fresh air.

THERAPEUTIC EMPLOYMENT OF TERPINE.

We have already, in the September number of the GAZETTE, referred to the researches of Lépine as to the therapeutic employment of terpine, and we abstract now from the September number of the *Revue de Médecine* the latest investigations of the same author on the physiological and therapeutic properties of terpine.

Terpine, a crystalline hydrate obtained from the oil of turpentine, is readily soluble in alcohol (in the proportion of 1 to 7). In cold water it is soluble in the proportion of 1 to 200; in water which has first been boiled and then cooled down to a lukewarm state it dissolves with still greater ease.

Lépine maintains that terpine has an action very similar to that of turpentine, but acts not only in smaller doses, but also is much better borne by the stomach than the latter. The crystals of terpine have neither taste nor odor, and create, therefore, no repugnance on the part of the patient, as is so often the case with turpentine. But these are not all the advantages which Lépine claims for terpine. "Fluidity and ease of expectoration," our author declares, "are the rule after terpine, but not after turpentine." And as this sort of expectoration is produced by terpine, even if given in a small dose, this drug must be regarded as the "best expectorant in existence." In a dose of 3 to 9 grains the drug exerts the above-mentioned therapeutic effect with great promptness. Of two hundred patients in whom terpine was exhibited not one complained of any inconvenience experienced by the drug, while the majority felt so convinced of its utility that they asked for its continuance. In two chronic cases, even, which had been very rebellious, and resisted every other medication, terpine given in 2-gramme (30 gr.) doses brought prompt relief.

It is a peculiarity of the drug that given in a large dose its action is just reverse from its effects produced when given in small doses (about 3 to 15 grains),—*i.e.*, it suppresses expectoration when given in large doses, and is therefore useful in cases of bronchorrhœa.

Next to its action on the respiratory passages, its diuretic effects claim our attention. In his early researches Lépine thought favorably of its diuretic power, and anticipated good services from the drug in chronic nephritis. His latest and more exhaustive observations, however, have convinced Lépine that no such therapeutic employment of terpine was to be thought of, and that the drug, on the contrary, might, especially in Bright's disease, do considerable mischief, as it decreases the renal secretion, and even causes albuminuria and hæmaturia. The latter consequence may ensue after large doses, and is to be diagnosed not merely by simply inspecting the urine, but by examining the solid sediment for blood-corpuscles, or testing the urine with oil of turpentine and tincture of guaiac, when, in cases where blood is present, the characteristic blue color will appear. In healthy individuals, however, no untoward symptoms are ever produced, as was demonstrated by a large number of conclusive experiments. Testing the physiological effects of a watery saturated solution on the blood of animals, Lépine obtained the following results:

1. Hæmoglobinhæmia, transitory, and without hæmoglobinuria, but with considerable polycholia.

2. Anuria for twenty-four hours following the introduction of the drug into the blood. The scanty quantity of urine secreted during another twenty-four hours looked like a watery infusion.

3. Small quantity of urea in a dark-colored urine.

As to the action of terpine on the nervous system, Lépine found it to act quite the same as turpentine, though in one-third of the dose required of the latter. In neuralgia and hystero-epilepsy the drug proved actually a success in the limited number of cases in which it was tried by Lépine.

In cases of bronchitis it is best given in a watery (and slightly alcoholic) solution, and can be associated with any convenient syrup. In nervous affections it will often be required

to combine with it an astringent, in order to avoid diarrhœa.

THE THERAPEUTIC USE OF IODOFORM COLLODION, ESPECIALLY IN NEURALGIAS.

Dr. William Browning, of Brooklyn, in the October number of *The American Journal of the Medical Sciences*, gives his experience with this remedy for external application, together with notes on the preparation itself, and a brief study of its action. The strength usually employed is one part of iodoform to fifteen of collodion. A half-ounce is usually sufficient for any ordinary single application. Dr. Browning has found it most effective when painted on in very thick layers, which may be conveniently done with the usual camel's-hair brush. As soon as one coating becomes a little firm another is applied, and so on until it appears to have an average thickness of half a millimetre. In the neuralgic cases a cure, when effected, was usually accomplished with one or two applications.

The class of troubles found most amenable to this treatment was narrowly localized neuralgias, especially when corresponding to some particular nerve and not dependent on any demonstrable lesion. In fact, if a neuralgia, or what is thought to be one, proves intractable to this means, we should doubt its being a purely functional affection, and look carefully for some tangible cause. It has thus a certain diagnostic, as well as a therapeutic, value. Several times its complete or partial failure has led to a more searching and successful examination. Even in such cases much temporary relief is often afforded.

Supraorbital neuralgias, even of malarial origin, particularly if the miasmatic infection dates back some time, seem quite amenable to this treatment. Of course it is not recommended as a substitute for quinine here, but only as an adjuvant where the latter fails or acts too slowly.

UNTOWARD EFFECTS PRODUCED BY ANTIPYRINE.

As is to be expected of a new and not yet sufficiently tried drug, the reports regarding antipyrine are in some respects contradictory. This variance is less in reference to its antipyretic virtues, though it exists even in this respect, than regards its ability to cause untoward effects.

Strauss, of Barmen, published in the *Berlin. Klin. Wochenschrift* of August 31 a case of serious results following upon the administration of antipyrine, which ought to be known to every practitioner who wishes to employ antipyrine in his practice.

Before describing the case, Strauss mentions that in a Jena hospital the drug was used four times only, and that in two cases no antipyretic effect at all could be obtained, while in two others serious collapse ensued.

His own case was that of a typhoid-fever patient in the second week of hyperpyrexia. He gave antipyrine in doses of 1+1+0.5 gramme (15+15+7½ grs.); but as the temperature rose suddenly very high, he gave, following Filehne's instructions (the discoverer of antipyrine), 2+2+1 gramme (30+30+15 grs.). The consequences were of a most alarming nature,—viz., collapse, subnormal temperature, small and intermitting pulse, irregular cardiac action, weak voice, and coldness of extremities. Besides these symptoms, Strauss noted a purpura-like eruption on the back and lower extremities of the patient, which, however, on the application of vinegar and water, disappeared again.

We regard the above observations as a sufficient warning to exercise great care in the administration of antipyrine, without entitling us to condemn the use of the drug altogether.

A NEW SURGICAL DRESSING.

For some time past Dr. Robert Park has been using for the dressing of sores and ulcers a powder composed of burnt *kieselgühr* and iodoform, to which a varying proportion of eucalyptus oil or other odorating substance is added (*Practitioner*, September, 1885).

Kieselgühr, it may be mentioned, is a diatomaceous earth, and is otherwise known as white peat. When this is burnt in a furnace an extremely light powder is the result, composed entirely of inorganic ash, varying in color from pure white to a pinkish tint. It is extremely absorbent and antiseptic.

As a diluent for iodoform it has no equal, and, as it is much cheaper than the latter, it is economical in use. For insufflation it is admirably adapted, owing to its lightness and absorbent powers; and it has been thus prescribed in naso-pharyngeal affections, and in gynæcological practice. Upon the whole, he has been well satisfied with the results.

For cases of chancroid it is better adapted than iodoform alone, in the proportion of equal weights. In this form, indeed, it is

adapted for dressing either the soft or the hard sore.

As a dusting powder in erysipelas, erythema, and eczema, its advantages over starch and other powders are owing to its great power of absorbing moisture; but its extreme lightness is against its use *alone* for this purpose.

Mixed thoroughly with absorbent cotton-wool, it adds greatly to its absorbent power, and furnishes it with detergent and antiseptic qualities. In this manner it forms an excellent elastic dressing for boggy ulcerations.

There are many other uses to which this remarkable substance will be found adapted by practitioners when they have become acquainted with it.

VARICOSE VEINS.

Varicose veins are frequently exceedingly troublesome and sometimes dangerous, and we therefore draw the attention of our readers to an article which appeared in the *British Medical Journal*, November 5, 1885, by DR. J. F. FRY, strongly advocating the removal of a considerable length of the varicose veins, as first proposed by Dr. Steele, of Bristol, and Mr. Marshall, of London, in the *Lancet*, January 23, 1875. Perhaps the method of operation can be most readily understood by reading a description of its performance as detailed by Dr. Fry:

"An ink-mark about an inch long was made over each of the two varices (one near the ulcer, the other above the knee), and, the patient being under the influence of an anæsthetic, a Martin's rubber bandage was firmly applied from the toes to the middle of the thigh, and removed after a Foulis's tourniquet had been placed round the thigh at the upper margin of the bandage. The limb was now bloodless. Under carbolic spray (one in forty), a longitudinal incision was made through the lower ink-mark, but only skin-deep, and extending into the ulcer. The tortuous varix next was dissected out and ligatured above and below, and thus a piece of vein six inches long was removed through an incision one inch in length. The edges of the skin were brought together with silver-wire suture, and antiseptic dressing applied. The second varix having been treated in the same way, the limb was firmly bandaged and (after the tourniquet had been removed) swung in a Salter's cradle. During the first three days the temperature ranged between 99° Fahr. and 100° Fahr., and then fell to normal. The wound was dressed antiseptically on the third, fifth, and eighth days, and on the last date the sutures were removed."

The conclusions reached by Dr. Fry are as follows:

"If palliative measures afford sufficient relief, it is unwise to operate; but of the various operations the excision of the vein is the safest, and for its successful performance the following details must be strictly carried out:

"1. Excise through several small incisions (not more than an inch in length) in preference to removing one large piece, as by so doing the vein is occluded at several points.

"2. Mark the site of the proposed incisions before applying the bandage, as the position of the varices becomes indefinite when the limb is rendered bloodless.

"3. Apply the Esmarch bandage carefully, so as thoroughly to empty the blood-vessels; or, the wound becoming full of blood, there will be considerable difficulty in dissecting out the vein, and very troublesome hemorrhage may occur.

"4. Ligature the vein at its upper end, and dissect it out from above downwards.

"5. Remove as little as possible of the tissues surrounding the vein; but if this be unavoidable, take away also the deep fascia (which is but feebly supplied with blood, and will not favor union), and allow the skin to adhere to the vascular muscle.

"6. Apply the dressings and bandage the limb before removing the tourniquet. By this means hemorrhage is avoided and primary union encouraged.

"7. Above all, the careful employment of antiseptic measures is necessary, both during the operation and in the subsequent dressings."

COCAINE IN THE MORPHINE HABIT.

SMIDT and RANK, physicians of a prominent German morphine institute, confirm the value of cocaine in the cure of the morphine habit (*Berl. Klin. Woch.*, September 14, 1885). Their testimony and conclusions are formulated as follows:

1. Cocaine is a highly useful and almost indispensable factor in the cure of the morphine habit. It facilitates and shortens the latter materially, without exerting any untoward secondary influence upon the patient.

2. The principle of the cure consists in exhibiting morphine in decreasing and cocaine in increasing doses.

3. Cocaine acts best when exhibited sub-

cutaneously in a five per cent. watery solution.

4. The ordinary dose is ½ gr., and may be increased to 1¾ gr., though 3 grs. ought not to be exceeded.

5. A cocaine habit has never been noted to occur.

A NEW THERAPEUTIC PRINCIPLE IN THE USE OF MINERAL WATERS.

The chemical composition and the therapeutic action of mineral waters have engaged the attention of physicians for a long time. That mineral waters are efficacious in the treatment of certain classes of affections is well established, especially those which are benefited by influencing the mucous membrane of the alimentary canal.

Recently Sydney Ringer, of London, and Dr. Hayes, of Aberdeen, have emphasized the important influence which the chlorides exert in accelerating intestinal action, and thus far have confirmed the earlier experiments of Von Voit with reference to the influence of the chlorides, especially the sodium chloride, on the oxidation of albumen and the consequent increased formation and elimination of urea.

Mineral waters have of late years been used largely as saline purgatives, depending chiefly upon the use of those especially rich in sulphate of sodium and magnesium. But Von Mering, Frerichs, and Henry Thompson have for a long time urged that it was important to distinguish between those waters which are promptly purgative and those which contain a large combination of the *chlorides* of sodium and magnesium. Frerichs, especially on clinical grounds, has pointed out that in prescribing purgative waters it is well to have a more careful regard to their differences in chemical composition and their consequent different effects. If, he says, it is merely desired by increasing the secretion of the intestinal glands to render the contents of the intestines more fluid, and to evacuate them, all the aperient waters are more or less useful, according to the quantity of purgative salts they contain; but their continuous use, he adds, interferes with the process of digestion, and thus affects the general health. The effect, however, he says, is very different when, besides the sulphate of sodium and magnesium, large quantities of the chloride of sodium are present, as in some of the more noted mineral waters, for then we have the favorable influence of the chloride upon digestion and tissue-changes generally. Sir Henry Thompson has long advocated the use of a mineral water rich in chlorides as well as in sulphates. In his lectures he gives the results of experiments with natural and artificial compounds based upon this principle, and reaches the conclusion that in the natural mineral water, rich in chlorides as well as sulphates, the dose may be continuously diminished, and prolonged treatment is unattended with the exhausting and irritating effects following the use of waters which contain especially large quantities of sulphate of sodium. Here, then, chemical research and clinical experience harmonize, and physicians are coming to regard this old therapeutic agent among the large number of mineral waters as especially suitable for prolonged use, when taken, as it now can be, in its undiluted and natural state.—*Medical Record*, September 26, 1885.

THE PHYSIOLOGICAL ACTION OF SOME OF THE PREPARATIONS OF HYDRASTIS CANADENSIS (GOLDEN SEAL).

Dr. Fellner (Franzensbad) has investigated the physiological action of some of the preparations of hydrastis canadensis on the blood-vessels, heart, and uterus of the dog and rabbit. His results are embodied in a paper read before the *k. k. Gesellschaft der Arzte* of Vienna, April 29, 1885 (*Med. Jahrb. d. k. k. Gesellsch. d. Arzte in Wien*, 1885). The experiments were performed in the laboratory of Prof. von Basch in Vienna.

Schatz (Rostock), at the *Naturforscherversammlung*, 1883, indicated the favorable results he had obtained with golden seal in certain cases of metrorrhagia and menorrhagia. Instigated by this communication, Fellner undertook the research. Hydrastis canadensis causes alterations in blood-pressure and the heart's activity. Elevation of blood-pressure arises from contraction of the blood-vessels; sinking of blood-pressure from paralysis of the vaso-motor centres, dilatation of the blood-vessels, and slowing of the pulse. The depressor nerve is without influence in the sinking of blood-pressure caused by hydrastis; contractions and dilatations occur in the blood-vessels supplied by the splanchnic and other nerves. After compression of the descending thoracic aorta and the injection of large and then smaller doses, the pulse is alternately retarded and accelerated. Ultimately cardiac exhaustion and paralysis ensue. In small doses hydrastis stimulates the vaso-motor centres, in large doses paralyzes

them. It has a similar action on the nervous centres of the heart. It is not only a vessel-poison, it is also a cardiac poison. Hydrastis affects the uterine muscle in much the same way as it does the blood-vessels,—*i.e.*, causing contraction, followed by relaxation. The drug has a like effect on the small intestine.

The alkaloids of hydrastis resemble in their physiological action the crude drug and fluid extract. Berberine in simple, saturated aqueous solution, and berberinum phosphoricum in one per cent. solution, cause uterine contractions. Hypodermic injections of hydrastinum muriaticum give origin to very energetic uterine contractions. Both alkaloids may be exhibited *per os*, with like result. Dr. Fellner urges clinicians to give the drug a thorough trial. It may be of especial value to the gynæcologist and obstetrician.

A CASE OF TETANUS INFANTUM SUCCESSFULLY TREATED.

As the recovery of so few children from this very fatal disease has been placed on record, the following case, which was successfully treated by Mr. Henry Davy, deserves the notice of the profession (*Medical Press*, September 16, 1885).

About the middle of January, 1884, Mr. Davy was consulted by a strong country-woman, a laborer's wife, who had been eight years married, and the mother of five healthy children, about her infant, who had become very ill with fits some days after its birth.

On the 12th of January, 1884, Mrs. B. was confined of her youngest child, a strong, healthy, female infant (the subject of this paper); her labor was natural and quick, and, according to her account, was only of an hour and a half duration. The child appeared to be quite well till the seventh day after its birth, when it became fretful, and would not suckle; it refused to take the breast, and seemed to be in pain when attempts were made to nurse it. It uttered a whimpering, whining, unnatural cry, and got quite livid in the face; the head was thrown backwards, as also the neck; the body became quite rigid, as occurs in opisthotonos; the mouth was rigidly closed, owing to the spasmodic action of the masseter muscles, so that the finger was with difficulty introduced into the child's mouth, which was pursed up, and from which frothy saliva issued during the tetanic paroxysms; and while these lasted the mother, in her attempts to feed her infant, could not get the point of a teaspoon into its mouth, and every attempt made to feed the child only aggravated its sufferings, and brought on violent spasms, whereby the greater part of the food taken was expelled from its mouth. The hands were tightly closed, the thumbs at the same time being drawn across the palms of the hands; the thighs and legs were flexed and drawn up on the body, the great toes being abducted, while the others were flexed; the bowels were inclined to be costive, and the urine scanty. The child's cry was a peculiar suppressed whine, which is so characteristic of this fatal disease. The umbilical cord fell off on the fourth day after birth; the navel itself appeared quite healthy, and was free from any sign of irritation, but was slow in healing, and bled a little on the fourteenth day from the force of the child's crying.

The following treatment was ordered: the diet consisted of a teaspoonful of brandy mixed with one-third of a teacup of milk and two-thirds of warm water slightly sweetened; to be given warm from a spoon, a little at a time, during the intervals between the paroxysms.

The mother usually managed to get down about three teacupfuls of brandy and milk, prepared as above, in the twenty-four hours, by feeding the child shortly after it awoke from sleep, induced by taking a dose of the following mixture:

℞ Chloral. hydrat.,
Potass. bromid., āā gr. xvi;
Ext. ergot. liq. (Long's), ♏xlviii;
Glycerini, ʒiii;
Aquæ destillat. ad ʒiv. M.
Ft. mist.

A teaspoonful to be given every third hour, representing chloral hydrate and potass. bromide, āā ½ gr., and ext. ergot. liq., ♏ 1½, in each dose. After taking a teaspoonful of this mixture the child would generally fall into a sound sleep, lasting about three hours.

This treatment was steadily continued for fourteen days, when the child commenced to take to the breast again, and from this time there was very gradual but steady improvement, which ended in ultimate recovery. The child is now nearly one year and eight months old, and, Mr. Davy states, is perfectly strong and well.

A CONTRIBUTION TO OUR KNOWLEDGE OF ANTIPYRINE.

Dr. K. Bettelheim, Vienna (*Med. Jahrb. d. k. k. Gesellsch. d. Arzte in Wien*, 1885), has observed the rapid and constant effect of anti-

pyrine in causing a lowering of temperature in curable and incurable cases. He observed this action of the drug in puerperal fever, pneumonia, typhus, erysipelas, otitis, peritonitis, catarrhal fevers, mastitis, diphtheritis, multiple lymphomata developing with fever, and rheumatism. Disagreeable effects were seldom observed. They were usually transient, and produced only after long-continued medication. Vomiting, paræsthesia in hands and feet, itching in the nose, and decline of appetite were noted more particularly.

Dr. Bettelheim has never seen the antipyrine exanthem. He has attempted to determine the physiological action of the drug in the laboratory of Prof. von Basch in Vienna. From experiments on the lower animals he concludes that the lowering of temperature caused by antipyrine is due to the dilatation of the skin blood-vessels.

"It is intelligible," says he, "that when—as follows from the elevation of the skin-temperature—the skin blood-vessels are dilated and the internal blood-vessels—as follows from the increased blood-pressure—are narrowed, a larger quantity of blood streams through the skin blood-vessels in a unit of time, and there dissipates its heat, so that gradually the entire mass of blood is cooled down."

MARAGLIANO'S experiments (*Gazz. degli Osp.*, 1884, 72) lead to a similar conclusion. Maragliano, by examination with Mosso's plethysmograph, arrived at the conclusion that antipyrine causes a lowering of temperature by dilating the skin blood-vessels.

MURRI (*ibidem*, Nos. 89–91) says that antipyrine, chinin, salicylic acid, and kairine lower temperature chiefly by increasing heat-dissipation from the surface of the body.

Dr. Bettelheim's experiments have shown that "antipyrine causes a depression of blood-pressure (after a primary sinking and brief elevation), increases the skin temperature, and lowers the temperature of the interior of the body."

Although large doses of the drug were exhibited, no untoward effect on the heart-muscle was observed.

THE ACTION OF NITRO-GLYCERIN ON NEPHRITIS.

DR. P. B. BURZHINSKI draws the following conclusions from the study of three cases of chronic nephritis treated with nitro-glycerin (*Practitioner*, September, 1885):

1. Nitro-glycerin in small doses diminishes the quantity of urinary albumen passed per diem, and still more markedly the percentage of albumen in the urine.

2. The diurnal quantity of urine is perceptibly increased by nitro-glycerin, this increase persisting some time after the nitro-glycerin has ceased to be given.

3. Gradually increasing doses of nitro-glycerin influence still more decidedly the formation of albumen.

4. He has been unable to determine the influence of nitro-glycerin on the weight of the urine, the weight of the patients, and on the dropsy.

5. With the exception of slight and transient headaches, nitro-glycerin does not give rise to any disagreeable symptoms.

ON THE ANTIZYMOTIC ACTION OF QUININE IN TYPHOID FEVER.

The following note of PÉCHOLIER was recently presented to the Academy of Sciences by Prof. Charcot (*La France Médicale*, No. 47, 1885). We condense the main points. The powerful effects of quinine in typhoid fever are, according to some authors, due to its antiperiodic, and according to others to its antipyretic action, while Pécholier regards its antizymotic action in this respect as most prominent. Creosote, phenic acid, and quinine are the best agents to suppress the germs of typhoid fever. Pécholier consequently employs quinine in a certain systematical manner against typhoid fever, and records very satisfactory results.

He begins to give quinine in daily doses of 12 to 15 grains from the first day that the fever is diagnosed or suspected, and continues the drug in the stated doses during the entire period of hyperpyrexia and even during defervescence, though in decreasing doses. Clinging rigidly to this method of treatment, Pécholier has not lost a single case out of fifty and more which he has treated during the last couple of years. Besides this constantly favorable termination of the disease, the author emphasizes the singularly mild and shortened nature of the whole pathological process. In every instance the temperature was at least one degree less than would have been the case if the fever had not been treated with quinine. In most cases convalescence began on the twelfth or eighteenth day. In very rebellious cases the lukewarm bath repeated frequently was found to be an excellent adjuvant to the quinine treatment.

The specific antifermentative influence of

quinine can also be demonstrated in the prevalent infections of the puerperal and tubercular type, in scarlatina, blennorrhagia, and other affections. It would consequently be very desirable to observe the action of quinine on pure cultures of the typhoid fever bacilli and other microbes.

INJECTIONS OF ETHER IN SCIATICA.

DR. Z. ORTO calls attention in the *Journal of the American Medical Association*, October 17, 1885, to a case of sciatica successfully treated by hypodermic injections of sulphuric ether.

On October 29, 1884, he was called to see Mrs. C., whom he found in bed, suffering greatly with pain in her right leg and hip, unattended by redness or swelling. Mrs. C. is 39 years old, of a nervous temperament, has a good family history, and has always had good health until the birth of her last child, which occurred on February 14, 1883. The patient states that three days after the birth of this child fever came on, and continued for about six weeks, during which time she was unconscious; and that when the fever ceased and consciousness returned she was unable to move her right leg without excruciating pain. There were spasmodic contractions of the limb, which caused great suffering. She states she remained in about the same condition, except that there was a gradual wearing away of the pain, for six months, at the end of which time she was able, by the aid of crutches, to move around the house; but at no time was she free from pain; and two weeks prior to his first visit she was again seized with the intolerable pain in her right hip and leg that had previously caused so much trouble. She at once went to bed, and had been compelled to keep under the influence of opium.

On examination Dr. Orto found tenderness all along the course of the sciatic nerve, and, as before stated, without redness or swelling of the limb. All movements of the limb had to be performed by the aid of the patient's hand applied to the thigh, and with the left foot under the right. Sciatica was diagnosticated. Dr. Orto determined to give this remedy and method a trial.

On the morning of November 30 the patient received the first injection of 20 drops, the syringe being inserted behind the trochanter major, the point recommended by Dr. Comegys. The injections were given in the ordinary superficial way. Seven injections were used in all, at intervals of twelve hours, using in the last six 30 drops each. The injections were followed by violent pain of a burning character, which, however, soon passed off. The patient declared she could taste the ether distinctly by the time the syringe was withdrawn. The acute neuralgic pain was relieved by the first injection, and never returned as severely as before. Improvement was noted from the beginning, the patient sleeping soundly without any other anodyne. The progress of the case was favorable, though rather slower than those of Dr. Comegys, though Dr. Orto thinks this may be accounted for by the former condition of the patient. In less than ten days the patient was able to be out of bed, and has since been attending to her domestic affairs, enjoying perfect health, save a little stiffness in her right leg.

TREATMENT OF ACUTE EPIDIDYMITIS WITH SUBNITRATE OF BISMUTH.

DR. J. A. COMINGOR writes to the *Medical Record* for October 17, 1885, as follows:

"In your issue of July 11 a paragraph is published from the *Gazetta Medica di Roma*, setting forth the value of Fuller's earth in the treatment of acute epididymitis. For several years, and in many cases, both in hospital and private practice, I have been treating this affection with subnitrate of bismuth, with results nearly identical with those claimed for Fuller's earth. Under its application pain is speedily relieved, and tenderness and swelling subside in a short time. In fact, its action has been so uniformly beneficial I have not found it necessary to use anything else in ordinary cases. I direct it to be used as follows, to wit: Bismuth in indefinite quantity, water sufficient to make a paste about the consistence of thick cream, and with a large camel's-hair brush paint the scrotum two or three coatings, and repaint at intervals several times daily. To make the directions more definite, take bismuth and water in equal parts, mix, and apply as above. For the purpose of taking the weight off the cord and blood-vessels, I order some sort of scrotal suspension. If the ailment is severe enough to bed the patient, a broad strip of adhesive plaster or bandage fastened across or around the thighs, with sufficient padding under the scrotum and contents to elevate above the level of the body, to favor the return of blood, will be found serviceable. This mode of treatment in my hands has been so beneficial and satisfactory I have

for several years thought I ought to give it to the profession.

"As to its mode of action I am by no means clear. I have given it a great deal of thought, and have theorized in a variety of ways, without being able as yet to reach a satisfactory solution of the question. In the mean time I have observed, on making the application on the smooth, shining surface, that scrotal corrugation and shrinkage, with alleviation from pain, immediately followed. Now whether these effects are the direct result of the astringent and metallic properties of the agent, or whether they were due to the mere protection given the sensitive surface from the air, I know not; but that it is highly serviceable I verily believe."

CHLOROFORM AS AN HÆMOSTATIC AGENT.

Dr. Spaak, of Brussels, recommends in the *Journal de Médecine de Bruxelles* chloroform as an excellent hæmostatic agent, and as especially eligible for all operations in the mouth and throat. He uses chloroform 2 parts to common water 200 parts. Spaak once removed a sequestrum from the lower jaw without losing, as it were, a drop of blood, a single irrigation with the chloroform solution having sufficed to suppress every tendency to bleed. The same irrigation or gargles consisting of the same chloroform-solution Spaak uses also in the removal of a tonsil and other throat-operations.

The perchloride of iron, the water of Pagliari, alum, and all other known hæmostatics, have the disadvantage of producing an objectionable sanguineous clot. Chloroform acts quite differently: it stops the hemorrhage suddenly by immediately closing the blood-vessels, even those of a considerable size.

CANNABIS INDICA AS A NARCOTIC.

Mr. H. Lewis Jones states in the *Practitioner* for October, 1885, that he has been using cannabis indica in a large number of cases where he desired to produce sleep, especially when sleeplessness was accompanied by delirium.

In the delirium of typhoid fever and erysipelas and in delirium tremens it is most valuable, a few doses being sufficient to give refreshing sleep. It is important to give the drug in sufficiently large doses: 2 to 3 grains of the extract can be taken in the form of a pill every four or every six hours, though frequently the first dose is sufficient. He now prescribes cannabis indica as the routine treatment in all cases of delirium tremens coming under his care, whether simple or complicating injury or disease.

In only one case has there been any complaint of hallucinations. It had been ordered for a case of typhoid fever with much sleeplessness in an excitable young woman. After two or three doses she asked that the drug might be discontinued, saying that it caused her to see visions of beautiful gardens and the like. All the other cases were hospital cases. It is possible that among educated people mental disturbance would be more frequent.

He has heard of one case where two grains of the extract were said to have made a woman temporarily quite mad. In his experience doses of the extract of Indian hemp up to 4 grains produce a mild narcotic effect, the only abnormal symptoms noticed being a numbness of the extremities and slight mental confusion.

THERAPEUTIC NOTES ON DIABETES MELLITUS, WITH ESPECIAL REGARD TO SALICIN.

Dr. Dornblütt, of Rostock, publishes the results of his observations on diabetes mellitus in a large number of cases (*Deutsch. Archiv für Klin. Med.; Wien. Med. Bl.*, No. 26, 1885). All patients secreted a large quantity of sugar (three hundred to four hundred grammes (10–12 oz.) in twenty-four hours), and were placed on animal diet. Later the effect of various medicines was observed. Salicylate of sodium, iodoform, carbolic acid, and salicin were the principal drugs used. Salicin was given in single doses of 2 to 8 grammes (30–120 grs.).

Iodoform did not affect in the least either the secretion of sugar or the subjective state of health, while the three other drugs exerted a very favorable influence, and either wholly removed or considerably decreased the sugar secretion. They also compensated to a certain extent the sugar-increasing effects of amylaceous food, especially of potatoes, and increased the general strength of the patients. Carbolic acid did not act so favorably as salicylate of sodium and salicin. Larger doses than 0.5 (7½ grs.) could of course not be given.

As to the comparative action of salicin and salicylic acid, both appeared to act nearly alike, excepting in one case, where the former showed a distinctly greater power. Whether

salicin always or mostly surpasses salicylic acid must of course be left for future observations to decide; their therapeutic equivalence at least did not seem questionable to Dornblütt. Salicin did not show any undesirable after-effects, even when given in as large as 8-gramme (120 gr.) doses and 18-gramme (270 gr.) *pro die*.

Ebstein and other physicians have recently expressed an opinion that all therapeutic measures had but little if any influence over the diabetic process, and diet and hygienic regimen solely could effect a cure. Dornblütt could not verify this doctrine in every instance. There are, he says, patients who cannot tolerate a purely or nearly animal diet. Others again can sooner procure medicines than a daily meat-diet. To interdict all amylaceous food to a countryman would be identical to convey to him the impression that he could never be cured. Medicines, besides, will be required in nearly every instance to meet one or another indication directly or indirectly connected with the diabetic process. Even the strictest diet cannot, in the judgment of Dornblütt, cure a case of diabetes, unless the direct influence of medicines be added. Salicin seems, according to the stated experiments, well worthy of additional trials. It is best given in 3- to 6-gramme (45–90 gr.) doses before each meal. If the secretion of sugar has stopped, an amylaceous or leguminous ration may be permitted after the mentioned doses of salicin. It might even be suitable to combine salicin with opium, though no experiments have yet been made in this direction.

THE DRAINAGE OF ULCERS AND SURFACE WOUNDS.

Dr. H. Reder, of Aurora, Ill., writes to the *New York Medical Record*, October 3, 1885, that, thinking upon the deficiencies of the ordinary methods of drainage and the dressing of wounds, he has been led to devise a new method. He uses a flat piece of sponge, from one-half to one inch in thickness, in the centre of which he cuts a hole corresponding to the outline of, but larger than the wound, so that the sponge may rest about half an inch from its edges. This piece is then soaked in any antiseptic solution which may be preferred, and dried under slight pressure. It is then placed on the surface, the wound occupying the open part in the centre, and over it is put a piece of tinned wire netting with one hundred meshes to the square inch, wrapped in four layers of antiseptic gauze. Over this may be applied the ordinary antiseptic cotton or jute dressing. Dr. Reder says that he has found this dressing very useful in superficial wounds of large or small area in which there was a tendency to burrowing of the pus beneath the surrounding integument. The pressure of the sponge prevents this burrowing, and, the dressing being raised above the surface of the wound, there is no maceration from the retained secretions, and scabbing of the surface is promoted. When skin-grafts are made it is necessary to keep the surface moistened with equal parts of boroglycerin and water, otherwise the rapid drying of the wound may destroy the vitality of the grafts before they have taken root. The same dressing is, however, applicable to deep wounds, the openings of the drainage-tubes being in the open place beneath the wire cover. In the dressing of amputation-stumps a cap is made of wire netting which covers the end of the limb. In erosions of the os uteri Dr. Reder employs the same principle. A cap is made to fit over the cervix, and to this is attached a cone of wire gauze. Over the cone is drawn a rubber cap, a hole being cut in its centre corresponding to the apex of the wire cone. A cord is also attached to the apex of the cone in order to facilitate its removal by the physician or patient when desired. After making the desired application to the erosions the cap is applied over the cervix. The discharge flows away freely, while the eroded surfaces are protected from all friction, and healing is thus promoted.

ERUPTIONS FOLLOWING UPON THE USE OF ANTIPYRINE.

As the therapeutic employment of antipyrine becomes more and more general it is well to know that frequently an erythema has been observed after its use, as in the case of quinine. We abstract from the *Journal de Médecine* (No. 4, 1885) the report of several instances. A patient affected with typhoid fever had in the course of ten days ingested 6 drachms of antipyrine, when suddenly, without being marked by any subjective symptoms or modification on the part of the fever, an erythematous eruption appeared and spread over the entire body except the head, the palm of the hands, and the dorsal aspect of the feet. The eruption was of a bright red color, and disappeared completely on pressure; the large round patches formed by it frequently united so as to cover a large area of skin.

The drug having been suspended, the eruption disappeared promptly, but reappeared when the drug was exhibited anew. In another case, one of phthisis, an analogous eruption appeared after 7 drachms of antipyrine had been ingested. Other observations also go to show that an eruption may follow after even small and single doses of antipyrine, though much more rarely than in the course of a protracted antipyrine treatment.

COCAINE IN NERVOUS COUGH, WHOOPING-COUGH, AND TRIGEMINUS NEURALGIA.

Dr. Graeffer writes to the *Allgem. Med. Centralzeitung*, June, 1885, that he has successfully used warm inhalations of cocaine hydrochlorate twice a day in the following formula in the above-mentioned affections:

℞ Cocaine muriat., 0.06 (gr. i);
Aquæ dest., 45.0 (℥iss);
Pot. chlor.,
Aquæ amygd. amar., āā 0.5 (7½ grs.). M.
S.—Externally.

In adults and older children Graeffer employed the steam-spray; in smaller and irritable children the ordinary spray-apparatus, warming the cocaine solution previously under water. It is an important point to have the tongue drawn well forward, so as to allow the vapors to enter as deeply and freely as possible. In four cases of pertussis Graeffer obtained with this treatment a distinct shortening of the convulsive stage, lessened intensity of the single paroxysms, and larger intervals between them. In one case where rupture of vessels occurred in the pharynx during the paroxysmal coughs, the cocaine inhalations prevented the recurrence of this incident.

In two cases of hysterical cough, which had withstood all known remedies, four or five applications sufficed to permanently remove the affection.

Schneider, of Baden-Baden, cured with cocaine a lady patient who for the third time had been affected with neuralgia of the second and third branch of the trigeminus. The first time, five years ago, quinine in large doses had been successfully employed. The second attack lasted nearly one-half year, and did not yield to quinine, though it grew gradually indistinct under the influence of morphine and iron. This last attack was treated with 0.04 ($\frac{4}{100}$ gr.) of salicylate of cocaine injected subcutaneously into the right cheek. The effect was surprising: the pain disappeared immediately, a copious diaphoresis set in, and no ill after-effects were noticed. The injection itself produced neither pain nor irritation. The patient obtained a quiet night-rest, which had not been the case for a long time. After eight of these injections during the following six days pain was only felt when the exit-foramen of the nerve-branches were touched. Three galvanic applications (one pole permanently on the painful spots, the other on the neck) removed even these last traces of pain.

This treatment of trigeminus neuralgia invites to similar tests of cocaine.

THE THERAPEUTIC VALUE OF CHLORIDE OF CALCIUM.

Dr. W. Crighton (*Practitioner*, September, 1885) states that in glandular enlargement of the neck in children, where the glands seem massed together and are almost of a stony hardness, and in which both iodine and cod-liver oil have failed, chloride of calcium will frequently produce the most satisfactory results. After some weeks' patient use of the chloride, with careful attention to diet and hygiene, there seldom fails to be noticed a softening and separation of the individual glands, and generally in a few months such a reduction in size and complete disappearance in milder cases has taken place as to warrant the term *cure* to be applied to the case. On the continuance of the remedy, however, an increase of size often takes place, necessitating its continuance for intervals of a year or more. Dr. Crighton has also found the chloride of calcium useful in cases where suppuration has occurred. In pulmonary phthisis he has not found the chloride so useful as it is claimed to have been in the hands of others. He thinks that its employment should be restricted to cases where there is evidence of the bronchial glands being decidedly enlarged. In scrofulous caries he has also obtained very satisfactory results.

Crystallized chloride of calcium should always be prescribed, as the anhydrous salt forms a turbid solution and has an unpleasant taste. The recognized dose is from 10 to 20 grains and even more, but he has generally used a smaller dose of 1 or 2 grains for young children, and rarely over 12 or 15 for adults. The formula which he uses is five ounces of the crystallized salt to seven ounces of syrup, the dose varying from 5 to 40 minims, according to the age. He always gives it in milk after meals.

THE MEDICAL TREATMENT OF UTERINE HEMORRHAGE.

Dr. M. A. Mendes de Leon, Privatdocent at the University of Amsterdam (*Archiv für Gynækologie*, 1885, Band xxvi. Heft 1), has contributed an interesting and suggestive paper on the employment of hydrastis canadensis in uterine hemorrhage. The inquiry was suggested by the remarks of Schatz, of Rostock, on golden seal in metrorrhagia and menorrhagia at the fifty-fourth *Naturforscherversammlung* at Freiburg, 1883. The communication supplements the paper on the physiological action of golden seal, by Dr. L. Fellner, which appeared in the *Mediz. Jahrb. d. k. k. Gesellschaft d. Arzte in Wien*, 1885. Allusion to the latter paper has been made.

Hydrastis Canadensis, L.,—Warneria Canadensis, Milleri): Canadisches Wasserkraut, gelbes Blutkraut (German); yellow Puccoon, Golden Seal (American),—is a plant growing abundantly in the United States from the Canadian border to the Carolinas and Tennessee. It belongs to the family of the Ranunculaceæ, and the group of the Anemones. The rhizome, green and dried, is employed in medicine. The green rhizome, familiarly known as Yellow Root, is of a yellow color, very succulent and lactescent on fracture. According to the researches of Lerchen, it contains albumen, sugar, extractives, and an acid which forms with ferric chloride a green precipitate, but is not tannic acid. The rhizome also contains resin and ethereal oils. According to Hale's investigations (1873), the principal alkaloids are berberine and hydrastine.

Hager assigns the drug a place in the German Pharmacopœia as a tonic, antiperiodic, and antiphlogistic (*Handbuch der pharmaceutischen Praxis*).

Mendes de Leon exhibited the drug in forty cases with favorable results. The cases may be arranged under five categories:

I. *Menorrhagia.*—In those cases in which the usual pains accompanying menstruation are increased, in consequence of the genital congestion, to an intolerable colic. In mechanical dysmenorrhœa and in spasmodic obstructive dysmenorrhœa (Matthews, Duncan) hydrastis is of little value.

II. *Catarrhal inflammations of the mucous membrane of the body of the uterus and cervix.*—In this class of cases the practical value of the drug is great.

III. *Chronic inflammations of the pelvic connective tissue.*—Hydrastis lessens the congestion about the genitals during menstruation, and alleviates the abdominal pains usually experienced under such conditions.

IV. *Dislocations of the uterus, especially in retroflexio and -versio.*—It goes without saying that the drug is of value only in those cases in which, on account of adhesions, reposition of the organ is impossible.

V. *Climacteric hemorrhages.*—What the effect of the drug would be in cases of bleeding myomata Mendes de Leon is unable to say. Negative results were obtained in two cases.

The preparation exhibited was a strong tincture. Fifteen to twenty drops were given from four to five times daily, commencing fourteen days before menstruation. In certain cases the drug was exhibited during the intramenstrual period.

Mendes de Leon thinks, with Schatz, that hydrastis affects directly the uterine muscle and blood-vessels, producing contractions, and thus diminishing genital hyperæmia.

Unpleasant consequences from the exhibition of the drug are seldom observed. Digestive disturbances and obscure nervous symptoms were infrequently observed.

Mendes de Leon recommends the drug in cases of metrorrhagia conditioned upon a diseased state of the uterine mucous membrane, when the curette cannot be conveniently employed, or in conjunction with that instrument. In menorrhagia from the virginal uterus, the drug is indicated for obvious reasons.

THE EMPLOYMENT OF THE HIPPURATES OF LIME IN THERAPEUTICS.

M. V. Poulet, a French physician of Plancher-les-Mines, calls attention to the very superior powers of the hippurates of lime and of lithium in the treatment of many disorders of assimilation.

To begin with, M. Poulet announces that the principal acid of the gastric juice is not hydrochloric, as generally taught, but is *hippuric acid.* Like all scientific Frenchmen who believe that they have discovered something, M. Poulet feels no wavering doubts about his results, but states that he has "demonstrated peremptorily" that the acid principle of the gastric juice is no other than hippuric.

Starting with this new physiological dogma, M. Poulet reasoned that salts formed with the hippurates would be very soluble and efficient. He therefore had prepared a hippurate of lime, and has used this extensively for several years (*Gazette hebdom. de Méd. et Chir.*, 1884, and *Bulletin Général de Thérapeut.*, August 30, 1885).

The utility of the lime-salts in many disorders is admitted. Dr. Poulet, however, contends that the practice of giving them in strongly acid media, as at present is done, works eventual injury. On the other hand, Professor Sansom, of Grignon, shows that phosphate of lime, given undissolved, passes unchanged through the intestines. The problem, therefore, is to get a lime-salt which will be easily absorbed, and yet will do no harm by reason of the excessive acidity of the vehicle. This salt has been found, it is thought, in the hippurate of lime. M. Poulet advises that the rachitic, the scrofulous, the phthisical persons suffering from osteomalacia, or from ununited fractures, also infants with imperfect dental development, be given hippurate of lime in combination with phosphate of sodium. In this way both lime and phosphorus are taken and assimilated.

The hippurate of lime, according to the enthusiastic Dr. Poulet, possesses wonderfully specific properties: 1, against affections of the urinary passages; 2, against affections of the liver; 3, against certain diseases of the skin and mucous membranes; 4, against a great number of diseases of the stomach and intestines; 5, against diabetes; and, 6, against chronic rheumatism and gout.

In subacute cystitis and in lithiasis the hippurate given in the form of a syrup is recommended.

In diseases of the skin dependent upon the tuberculo-scrofulous or upon the neuropathic diathesis the hippurate is believed to work many cures. Poulet cites some instances in which diabetes was much improved by his remedy.

It would be useless to catalogue all the disorders in which the wonderful hippurate is indicated. In the main they are disturbances in assimilation, and are disturbances in which some mineral food is needed by the organism. It is quite possible that M. Poulet has obtained a very digestible mineral preparation, and one which deserves a trial on that ground. His claims for its wonderful efficacy, however, are extravagant and ill-founded.—*Medical Record*, October 17, 1885.

Mr. Thomas W. Watkins states that a mucilage of acacia, which will not spoil, may be made according to the following formula:

Oil of gaultheria, ♏xv;
Calcium phosphate, sufficient;
Water, ℥viii;
Acacia, ℥iv.

Reviews.

A Text-Book of Pharmacology, Therapeutics, and Materia Medica. By T. Lauder Brunton, M.D., D.Sc., F.R.S., etc. Adapted to the United States Pharmacopœia by Francis H. Williams, M.D., Boston, Mass.

Philadelphia: Lea Brothers & Co., 1885.

This extremely handsome volume of nearly one thousand pages is the work announced more than fifteen years ago by its author, but which his fastidiousness has caused him to hold back until it had been written and rewritten, so that in its present form it no more represents the original product than does the full-grown man the babe. As it now stands it is really two books combined into one,—a sort of Siamese-twin arrangement, in which each individual, if safely separated, would be capable of distinct life. The first part is a treatise upon the action of drugs, written from the stand-point of the physiologist. It is really a work on physiology, commencing with an attempt to correlate Lockyer's theory that the elements are compounds with our physiological lore, and ending in a study of the antagonism of drugs.

The second portion of the book is a treatise upon individual drugs, supposed to be especially prepared and adapted to the use of students. According to our point of view, this second portion of the book is not nearly so valuable as the first part. It is overloaded with materia medica, and its pages much occupied with handsome large type. As a result of this, the descriptions of the physiological action of drugs and the discussions of their value in the treatment of disease are reduced to a minimum. As an example, under the heading of Lead-Poisoning, there is no mention whatever of plumbic albuminuria, cerebritis, anæsthesia, or any of the rarer forms of lead-poisoning, whilst the consideration of the pathological changes produced by lead occupies but a few lines. The practitioner who knew absolutely every word of this article would still be unfitted to recognize obscure cases of lead-poisoning. Of course whatever is stated in this second part is stated with that remarkable clearness which is characteristic of its author's style, and we may also add that it is perhaps stated a little too positively and dogmatically. The references are exceedingly few,—not one to twenty pages,—so that the reader must take all statements as resting upon the authority of the author.

The first portion of the volume is of much

more value. It is really an original work, differing entirely from any which we know. It is composed of nineteen chapters. The first of these is devoted to a discussion of the general relations of the organism to substances affecting it; the second to the consideration of the circumstances affecting the action of drugs on the organism. The next thirteen chapters are devoted to the action of the drugs on protoplasm; blood and low organisms; on invertebrata; on muscle; on the nerves and nerve-centres; on organs of special sense; on respiration; on circulation; on the surface of the body; on the digestive system; on tissue-change; on excretion; on the generative system. Chapter xvii. details the methods of administering drugs, chapter xviii. enlarges upon antidotes, while chapter xix. has for its subject the antagonistic action of drugs, and is followed by a brief discussion of dosage.

We hardly know how, in the space which is allotted to us, to properly consider this very valuable general discussion of the physiological action of drugs. It shows a very intimate acquaintance by its author with the science of the past and present, and is often exceedingly suggestive, and always clear and concise in its statements. As an instance of its suggestiveness, we notice a statement on page 128 that kreatinin has a very remarkable power in increasing the ability of muscles to do work and to rapidly recover from exhaustion. After this statement of the fact comes its correlation with the well-known effect which beef-tea has upon some persons as a stimulant. It is argued that the kreatinin and other waste-products in the beef-tea act in these cases upon the muscles themselves as well as upon the nervous system.

It is an easy matter to find fault; but feeling, as we do, that Dr. Brunton in the present volume has laid the profession under great obligations to him, we are disposed far more to praise than to blame, and most gladly state that there is far more reason to praise than to criticise; yet in no captious spirit we object to the occasional credulousness of the author, or, to put it in other words, to the tendency which is shown to accept, as proven, facts and theories which are striking, but which rest upon slight foundations of proven evidence. As an instance of this credulousness, we may cite a paragraph which, as taken from a book of sober science, must be looked upon as wonderful:

"Different kinds of spirit appear to have a tendency to affect different parts of the cerebellum, for good wine or beer is said to make a man fall on his side, whiskey, and especially Irish whiskey, on his face, and cider and perry on his back. These disturbances of the equilibrium correspond exactly with those caused by injury to the lateral lobes, and to the anterior and posterior parts of the middle lobe of the cerebellum respectively."

Fortunately, the authority for these delicious assertions is given, such authority being "Bailey's Magazine of Sports."

The same tendency on the part of the author to accept rather than to deny shows itself in a very serious manner in the chapter upon tissue-changes. We are there given a list of nineteen drugs which lessen the production of heat by acting directly upon tissue-change. The fact is stated positively, without qualification; and yet of not one of these drugs have we positive knowledge that it does affect the temperature in the way that is spoken of. A great drawback to scientific therapeutics is the wide-spread tendency to believe that which suits our fancy for the moment, and to receive as proven alleged facts which are at the most only probable. It is so easy, so luxurious to round out our theories with dogmatic statement, and to erect edifices whose front is lovely and apparently perfect. But if in any place in science the spirit of doubt and hesitation is necessary, it is in therapeutics. Such dogmatic teaching as is seen in certain parts of this book leads to contradictions and to differences irreconcilable in the eyes of *οἱ πολλοι*, and, consequently, to contumely and contempt for physiological therapeutics.

INEBRIISM, A PATHOLOGICAL AND PSYCHOLOGICAL STUDY. By T. L. Wright, M D.
Columbus, O.: William G. Hubbard, 1885.

This small work is based upon the idea that "inebriism," as the author calls it, is the result of a neurotic temperament, and is, as it were, a disease rather than a crime. The more the relations between crime and insanity are studied, the more close do they appear to be, and there can be no doubt that there is a relation between inebriism and defective nervous organization; but we cannot perceive that a man who has surrendered himself to the vice of drunkenness is any more to be considered as irresponsible on account of defective organization than is the man who is ruining himself in sexual debauchery or is guilty of other crimes. Low nervous organization means defective will and strong animal passions; and given these factors in any individual, there is always great danger of a

criminal life. The criminal temperament or diathesis is as pronounced as is the religious temperament; and there are hundreds of human individuals who are, humanly speaking, unable to escape from the fate prepared for them by the structure of their own nerve-centres. Undoubtedly certain lines of weakness—excessive development of certain animal propensities, etc.—are inherited from father to son; but this does not apply any more, in our opinion, to inebriety than to other kinds of vice. If drunkenness be so purely a disease, it is very extraordinary that it should be transmitted, at least in the higher classes, almost solely to the male issue. It is almost exclusively the sons and not the daughters of our better families in whom this vice develops.

The book of Dr. Wright is fairly well written, sufficiently diffuse, and lacking in point of statement to suit the most feeble intellect; and, so far as we have read it, is fairly correct and accurate in its statements of facts. It does not seem to us to contain anything at all novel, authoritative, or even forcible, at least for the professional reader. Indeed, we suppose it was by its author intended for circulation among the laity.

A Guide to the New Pharmacopœia, 1885. By Prosser James, M.D.
London: J. & A. Churchill, New Burlington Street, 1885.

This brochure is a discussion of the changes in the new British Pharmacopœia, and of course interests English rather than American readers. It contains a little over one hundred pages, and appears to be a practical work, intended for the use of British students and of practitioners who wish to become acquainted with the changes and the novelties of the Pharmacopœia, but lack time or inclination to study the Pharmacopœia itself. It seems well adapted for its object, being correct, as far as we can determine, in all its statements, clear and concise in its language, and judicious in the proportionate space allotted to the various subjects.

Tabulæ Anatomicæ Osteologiæ. Editæ a Carolo H. von Klein, Artium Magistro, Medicinarum Doctore. Editio Emendata.
Cincinnati, O., U. S. A.: Cincinnati Lithographic Co., 1885.

This book consists of thirty-two plates on osteology, thirty of which are devoted to the skeleton and the individual bones of which it is composed, one to the development of bone, and one to sections of bones, showing their internal structure. The description of the plates is in Latin, which the author designates in his introduction as "the universal medical language," which "all medical men are supposed to, should, and must understand." When closely examined, many inaccuracies are found in the lettering of the plates. For example (Tab. III.), the "tubercula zygomatica" appears to be part of the ramus of the inferior maxilla; the left central incisor of the lower jaw is called the "symphysis;" and the mental foramen and the foramen magnum are lettered, but not represented; the cribriform plate of the ethmoid (Tab. V.) is called the "crista galli;" the anterior clinoid process is lettered on the greater wing of the sphenoid; the tubercle on the zygoma is called the "tuberculum articulare," which, however, is represented in the plate in its proper position; the anterior intertrochanteric line (Tab. XXVIII.) is called "linea intertrochanterica *posterior*," while the lesser trochanter is lettered "linea intertrochanterica anterior," and the anterior surface of the shaft "corporis superficies *post.* externa," etc. A number of typographical errors occur, as "foram infroarbitale;" "margo asper; qui iungitur alæ maior*os* sphen.;" margo asper, qui iungitur alæ *mino riossis* sphenoidei;" "canalis *f*allopii;" "femur dextrum varior *um* fœtium;" "femur *in* fautis," etc. Many of the plates are poorly executed, and the shading and perspective are often bad. In Tab. III., for instance, the anterior surface of the malar bones appears to be continuous with and to form a part of the temporal fossa; on the following page the nasal bones are too large in proportion to the skull, and the nasal duct for the size of the orbit; and in the lower figure it is impossible to tell whether the groove for the lateral sinus is intended to be represented as leading to the internal auditory meatus or to the foramen magnum! On the following page the internal auditory meatus is relatively too large, and it is uncertain on which surface of the petrous portion of the temporal bone it is situated; the inner surface of the cranial vault (Tab. VI.) is marked by an *elevated ridge*, which is lettered "sulcus sinus longitudinalis;" the styloid process in the plate representing the temporal bone is of almost natural size, while the rest of the bone has been reduced to "¼" size. The shading of the iliac fossa (Tab. XXII.) is such that it is a matter of doubt whether it is intended to be a concave or a plane surface. The plate of the outer surface of the inferior maxilla appears to represent a case of badly-

united fracture which has occurred at the symphysis, and in which the two fragments have formed an acute angle. The positions in which the inner surface of the frontal, the outer surface of the occipital, and the palate bones are represented are not those best suited to the study of these bones.

While some of the plates are very good, as those of the skeleton, the frontal bone (outer surface), the bones of the trunk, etc., the work cannot be recommended as possessing any other advantage except that of cheapness; while from the manner in which the plates are executed, from the typographical errors, and from the omission of all letter-press except the description of the plates, which is meagre in the extreme, it is decidedly inferior to most works on osteology.

H. M.

VON ZIEMSSEN'S HANDBOOK OF GENERAL THERAPEUTICS. In seven volumes. *Volume II.* ANTIPYRETIC METHODS OF TREATMENT. By Professor C. von Liebermeister. ANTIPHLOGISTIC METHODS OF TREATMENT. By Professor Th. Jurgensen. EPIDERMIC, ENDERMIC, AND HYPODERMIC ADMINISTRATION OF MEDICINES. By Professor A. Eulenberg. With twelve illustrations.

New York: William Wood & Co, 56 and 58 Lafayette Place, 1885.

The first volume of this work was reviewed in the last number of the THERAPEUTIC GAZETTE. The scope of the second volume is to be seen by the following list of the chapters:

ANTIPYRETIC METHODS OF TREATMENT.—Introduction. Chapter I. Abstraction of Heat. Chapter II. Antipyretic Medicines. Chapter III. Antipyretic Dietetics. Chapter IV. Application and Results.

ANTIPHLOGISTIC METHODS OF TREATMENT, BLOOD-LETTING, TRANSFUSION.—Chapter I. Antiphlogistic Methods of Treatment. Chapter II. Blood-letting. Chapter III. Blood-letting (continued). Chapter IV. Transfusion.

EPIDERMIC, ENDERMIC, AND HYPODERMIC ADMINISTRATION OF MEDICINES.—Chapter I. Bibliography. Chapter II. Epidermic Administration of Medicines. Chapter III. Endermic or Intracutaneous Administration of Medicines. Chapter IV. Hypodermic or Subcutaneous Administration of Medicines. Chapter V. Organic Remedies. Chapter VI. Organic Remedies (continued). Chapter VII. Inorganic Remedies. Chapter VIII. Additional Note on some New Antipyretics.

We think, on the whole, that the second volume will probably be found less interesting to most American practitioners than the first. On reading the discussion of antipyresis, by Professor Liebermeister, we have been somewhat disappointed in not finding more made out of the statistical reports with results obtained in all portions of the world's literature by the use of the antipyretic method, and also in the comparatively slight use made of literature not of Teutonic origin.

Thus, taking the subject of alcohol, Dr. Liebermeister only refers to one author that is not German, whereas, as every pharmacologist knows, probably the most important part of the literature of alcohol is in French or English. Indeed, we may say that the examination of the whole book strengthens the first criticism which we made, that the work is a handbook of German rather than of the world's therapeutics. Probably the most important part of Dr. Liebermeister's article is that which treats of the use of the cold bath in pneumonia. He states that he has himself treated two hundred and thirty cases of acute pneumonia with abstraction of heat, and claims that the results were a mortality of 16.5 per cent., while in six hundred and ninety-two cases treated in the same hospital by other methods, the mortality was 25.3 per cent. It is worthy of remark that the cold pack as he uses it differs entirely from the cold pack as employed in this country. He says,—

"A large linen sheet, generally doubled, or even four-ply, is soaked with cold water, well wrung out, and then spread upon a woollen blanket. The patient, stripped naked, is put first into the wet cloth, and then tucked into the blanket. It is desirable to make the wet sheet extend down only from the neck to a little beyond the knees, so that only the dry blanket is wrapped round the feet. Meanwhile a second packing is prepared on a second bed close at hand, or on a mattress laid on the floor. After about ten minutes—in the later packings after from fifteen to twenty minutes—the patient is taken out and wrapped up anew, and so on from three to seven times altogether."

According to our thinking, the American method of using the cold pack is much better than this. It consists, as our readers well know, in simply wrapping the patient up in a sheet drenched with cold water, and leaving him thus mummified, exposed to the air and to frequent outpourings of cold water over the sheet. The pack, as used by Liebermeister, may be considered as a warm rather than a wet pack, since the temperature of the sheet is rapidly changed by the heat of the patient's body.

The article upon blood-letting is an exceedingly scientific one, and indeed is so scientific that we think very few of those who buy the book will ever thoroughly study it. The judgment which Professor Jurgenssen gives is very strongly against the practice of

blood-letting, and he even condemns the local abstraction of blood. The best thing that he can say for it is that it does no harm, "only one forgets somewhat that a withdrawal of blood is at the same time a general one, and acts as such." *En passant*, here is another example of the horrible defilement of the English language which is being wrought by these crude translators of German. The uncouth *eins* has apparently taken out its naturalization papers, and soon will be admitted, we fear, to full citizenship, barbarian as it is. So far as the local abstraction of blood is concerned, we desire earnestly to express a belief founded upon a good deal of practical experience, that local blood-letting properly employed is a therapeutic measure of the utmost importance. General blood-letting we have not seen practised more than five or six times in twenty years. One patient was apparently killed by it, one case of apoplexy was promptly restored to consciousness, one case of cerebral convulsions was immediately relieved, and in the other three cases no apparent effect followed.

The article on transfusion is also a very elaborate one, and ought to be carefully read by all who practise the operation.

Why the subject of hypodermic administration of medicines should receive such detailed treatment as it does in the present volume, we do not understand. A medicine introduced into the system is the same through whatever channel it finds entrance, so that an article on the hypodermic administration of medicine to be complete should be a general treatise on therapeutics.

A Complete Pronouncing Medical Dictionary, embracing the Terminology of Medicine and the Kindred Sciences, with their Signification, Etymology, and Pronunciation. With an Appendix. By Joseph Thomas, M.D., LL.D. On the basis of Thomas's Comprehensive Pronouncing Medical Dictionary.

Philadelphia: J. B. Lippincott Company. London: 15 Russell Street, Covent Garden, 1886.

In former years Dunglison's Medical Dictionary held the American market without a rival. Some years since appeared a little book by Dr. Joseph Thomas, entitled "A Comprehensive Pronouncing Medical Dictionary," which was at once recognized as a valuable work, especially remarkable for the care which it bestowed upon the pronunciation and derivation of words. The present volume may be looked upon as a successor to, rather than a new edition of, the work just mentioned. It is a complete rival of the old medical dictionary of Dunglison's. It contains over eight hundred closely-printed, double-column pages, which show in all parts of them the same care, the same classical learning, and the same wide general information which brought success to its smaller predecessor. We have no doubt that the book of Dr. Thomas will have a large sale, and a very distinct influence in increasing the correctness in the use of medical terms and the perfection of medical culture in this country. If the more venerable volume of Dr. Dunglison's is not to be edged out by this lusty young colleague, its editors will have to look very carefully to the perfection of its strength in future editions.

If there be any defect in the present volume, it is the lack of care in regard to space. Thus, taking the word *boletus*, we read "from the Greek *βωλος*, a mass." As the readers of the dictionary are supposed at least to have some education, the words "from the Greek" are entirely superfluous. This form of expression is repeated indefinitely. "From the" requires about one-third of a line, and occurs six times on an average on a page; that is, "from the" occupies two lines to the page, making about sixteen hundred lines in the course of the book, which is, we estimate, about ten pages of unnecessary and perfectly useless words. In all works of the present class the tendency to increase in size is the one great thing that the editor must continually fight against, and hence what may seem a trifle is really a matter of some importance.

That a man who is an editor, and therefore captious, can find nothing more serious than this to complain of in the book of Dr. Thomas is, after all, the highest praise that could be awarded him.

Applied Medical Chemistry, and Manual for Students and Practitioners of Medicine. By Lawrence Wolff, M.D., Demonstrator of Chemistry in Jefferson Medical College.

Philadelphia: P. Blakiston, Son & Co., 1885.

In the majority of our American colleges our students are mainly taught the principles of chemistry, but not their practical application, with the result that their medical knowledge is soon forgotten. There are, of course, some few brilliant exceptions to this system of medical education, in which a practical acquaintance with chemistry is a requisite to graduation. To students and teachers in such colleges we can well recommend the little book before us; while to those graduates who

have been unfortunate enough to have obtained their medical education in colleges where chemistry was taught solely by lectures we can also recommend this book, either for the freshening up of the chemistry that they have then learned, or for practical use in analyses, which physicians, even those who do not profess to be chemical experts, are often called upon to perform.

A TREATISE ON PRACTICAL CHEMISTRY AND QUALITATIVE INORGANIC ANALYSES. By Frank Clowes, D.Sc., Lond. Third American from fourth English edition.

Philadelphia: Lea Brothers & Co., 1885.

Clowes's chemistry has already become a standard laboratory text-book, not only in England but in this country, and the appearance of the fourth edition can only serve to strengthen the hold which it already has. The book is divided into seven sections. In the first of these some simple directions are given for preparing the apparatus for use, with which the student's laboratory course should naturally commence. The second section deals with the preparation and properties of certain gases and liquids, which not only give the student a knowledge of chemical properties of the substances studied, but also serve to enable him to acquire skill in manipulation. The third, fourth, and fifth sections are occupied with the directions for employing the most important methods and processes employed in qualitative analyses, with tabular statements of the various reactions employed, with tests and methods of separation in qualitative analyses, and rules for their application for the analysis of any liquid or solid inorganic substance; while the last section consists of information concerning the fitting and furnishing of the chemical laboratory, together with methods of preparing solutions and certain special reagents. The author has certainly succeeded in providing a systematic, intelligible, and fully-equipped laboratory guide and text-book.

REVUE SCIENTIFIQUE.

The following is a summary of the table of contents of the *Revue Scientifique* for the past month:

September 19, 1885:

Physiology.—Preventive Inoculation of Cholera. By M. Chauveau.

Ethnography.—The New Religious Sects in Russia. By M. Tskany.

Zoology.—The Spleen in Fishes. By M. Phisalix.

Miscellany.—The Conquest of Tonquin (M. Harmand and General Bouet).

Book Notices.—Physiology of the Brain (M. Christiani); Hygiene of Paris (M. Colin).

Proceedings of the Academy of Sciences of Paris.

Correspondence and New Inventions.

September 26, 1885:

Advancement of the Sciences.—The Meeting of the British Association; The Duty of the State to Science (Playfair).

Physiology.—Temperature after Death. By M. Charles Richet.

Medicine.—The Microbe and Contagious Diseases. By M. Trouessart.

Book Notices.—Anatomical Reminder (M. Julien).

Proceedings of the Academy of Sciences of Paris.

Correspondence and New Inventions.

October 3, 1885:

Zoology.—The Deep Fauna of the Swiss Lakes. By M. E. Yung.

Anthropology.—Man in the Tertiary Period. By M. Zabrowski.

Biology.—Fecundity. By M. G. Delaunay.

Chemistry.—The Spectrum of Hydrogen. By M. Lagarde.

Book Notices.—Life and Works of Boucher de Perthes (M. Ledieu); Treatise on Light (Huyghens); The Fortifications of the Future (M. Cambrelin).

Proceedings of the Academy of Sciences of Paris.

Correspondence and New Inventions.

October 10, 1885:

The Conquest of Tonquin (M. Harmand and Admiral Courbet).

Advancement of the Sciences.—Paleontology in 1885. By M. G. Cotteau.

Biology.—Fecundity. By M. G. Delaunay.

Book Notices.—Mushrooms (M. Forguignon; Report on the Adulteration of Food (M. Grisey); Introduction to the Study of Chemistry (Würtz).

Proceedings of the Academy of Sciences of Paris.

Correspondence and New Inventions.

October 17, 1885:

Anthropology.—Stature in France (M. Bertillon).

Physiology.—Muscles and Heat-Production (M. Richet).

Botany.—Classification of Plants under the Evolution Theory. By MM. Heckel and Chareyre.

Geology.—The International Congress at Berlin. By M. Dagincourt.

Book Notices.—Encyclopædia of Chemistry; Dyspepsia and Dyspeptics (Dr. Leure).

Proceedings of the Academy of Sciences of Paris.

Correspondence and New Inventions.

Correspondence.

TREATMENT OF DROPSY WITH SALINE CATHARTICS.

To the Editors of the THERAPEUTIC GAZETTE:

GENTLEMEN:—I notice in the May number of the GAZETTE sulph. mag. in concentrated solution highly recommended by Dr. Matthew Hay for dropsical effusion. Noticing this has induced me to report three cases that have occurred in my practice within the last two years.

The first was a boy suffering from chronic malarial poison attended with a general dropsical effusion, though the scrotal sac was especially enormously distended and quite translucent. I gave the patient sulph. mag. in doses sufficiently large and concentrated to produce free watery evacuations from the bowels.

This was followed with carb. iron three times daily, and, except an occasional dose of sulph. quininæ, was the only treatment instituted. I had the satisfaction of seeing my patient make a speedy recovery.

The second was a similar case, treated in like manner, with the same happy effect.

The third was an adult male suffering with pleuritic effusion of the left pleural cavity. The heart was displaced, and on percussion I found complete flatness over the entire side.

Instruments for tapping were not available, so I was necessitated, for the present at least, to resort to medicinal means of treatment alone. I prescribed sulph. mag. as with the other cases mentioned. Ordered the affected side painted with tr. iodine occasionally, and a dose of sulph. quininæ two or three times daily. This constituted the treatment. At my next visit, two days later, I found a decided diminution in the quantity of the effusion, which continued to decrease, but not so rapidly as at first, until I had the happiness of pronouncing my patient well.

Had instruments been at hand upon my first visit I should have operated immediately, and so certain was I that an operation would be necessary that I proceeded to make arrangements for procuring instruments. I think the remedy deserves further trials, and as opportunities present themselves I shall push my investigations with it.

H. H. HARALSON, M.D.

HARPERVILLE, MISS.

RARE SEQUEL OF TYPHOID FEVER.

[We have received the following communications in reply to the query published in the last number of the GAZETTE by Dr. Chassagne.—EDS.].

To the Editors of the THERAPEUTIC GAZETTE:

GENTLEMEN:—The inquiry of Eugene J. Chassagne, M.D., in the October number of the THERAPEUTIC GAZETTE, calls to my mind a case very similar to the one he reports under the heading of "A Rare Sequel of Typhoid Fever."

During the summer of 1882, and while an *interne* at Bay View Asylum, Baltimore, it fell to my lot to treat a case of typhoid fever in the person of a young German, 25 or 30 years of age, which during convalescence was complicated with an attack of true intermittent fever.

The subject was admitted to the ward about the middle of June, with all the symptoms of a typical case of typhoid well marked. As the temperature was unusually high, but easy to control by antipyretics, his treatment consisted almost exclusively in the administration of large doses (20 to 40 grains) of sulphate of quinine at intervals of forty-eight hours.

Nothing of special interest occurred until convalescence was well established, when one evening about four o'clock I was hastily called to his bedside, to find him in a severe rigor, delirious, and with a temperature of 105° F. Being unable to determine the nature of the complication, I adopted for the time a "conservative line of treatment,"—viz., did nothing. The rigor continued for fully an hour, when it gradually subsided, and was followed by a profuse perspiration, after which the patient felt very comfortable till three o'clock on the evening of the third day, when he had another attack similar to the first.

After witnessing the periodicity of these attacks, and the profuse sweating stage that followed them, the complication was diagnosed "malarial fever," and quinine was immediately prescribed.

The quinine was persisted in for a week or ten days, but with no beneficial results. Becoming disgusted with my non-success, a change in the treatment was made. Fowler's solution in large doses was given three times a

day, with the most satisfactory results. He continued to improve rapidly, and was soon free from the disagreeable complication.

In this case I do not think the typhoid had anything to do with the origin of the intermittent, but each disease was separate and distinct.

J. H. BERST, M.D.

KOKOMO, IND.

Dr. J. Pyle, of Wilmington, Del., writes us as follows on the same subject:

I read with interest the report of the case of Dr. Eugene J. Chassagne in the last issue of the GAZETTE, p. 714.

I have seen one case, a man of 54 years, always a healthy, robust fellow, weighing about two hundred pounds. In September of 1884 he was taken down with a well-marked case of typhoid fever, characterized by the eruption, tympanites, etc. The maximum degree of fever, 104.5° F.

Dr. J. A. Draper, of this city, assisted me in the management of the case.

The typhoid fever having run its course, the case became complicated by the appearance of a malarial intermittent, which was controlled only by giving full doses of quinine, as recommended,—viz., gr. xxx three hours before the expected paroxysm. I may state that the patient had been subject to malarial poisoning for years previous.

In reply to an article in the THERAPEUTIC GAZETTE for October, "A Rare Sequel to Typhoid Fever,"—that is, intermittent fever following on the fourth day after the typhoid fever had ended,—I may state that I had such cases here last fall. One that I recall was a girl, 17 years old, in whom the fever disappeared on the twenty-fourth day. Five days later she had chill, fever, sweating,—regular intermittent fever, which a few doses of quinine put an end to on next day, and patient went on to health. This is not the only case. I have seen this intermittent fever so often after other diseases that it is here regarded as a common occurrence. And with regard to treatment of typhoid fever by very large doses of quinine, 20 to 30 grs. in my opinion is not only of no use, but is even dangerous; it is death to the patient, not to the fever. I have now had one hundred and forty-six patients, from 8 up to 45 or 49 years of age, in the course of twenty-two years, here in town and country, and with only one death out of the one hundred and forty-six cases. Some may think these were all, of course, mild cases; well, here I will give a case from my case-book:

Female, aged 14. Fever on the tenth day. Evening temperature, 104° F.; morning temperature, 11th, 104.6°. Ordered cold bath, temperature 70° down to 60°. Temperature, evening, 106°; bath, temperature, 60° down to 40°. Next morning, 12th, temperature 105°. In evening of fourteenth day of disease the temperature under tongue was 106.4°. Patient in a profound stupor, perfectly unconscious. I ordered ice-water to be sponged to chest and abdomen and applied in bladder to head. The temperature came down next morning, fifteenth day, to 101°; evening of fifteenth day, 101.2°; sixteenth day, morning temperature 100°; evening 100.4°, and in a few days down to 98°. I think all cases should be treated with cold whiskey, good diet, small doses of quinine, and citric acid drink. I have had cases with ulceration of tongue and throat, ulcers that were the size of five-cent pieces, mouth black with sordes, and membrane in throat, yet with plenty of stimulants helped them all to recovery.

C. H. SCHMIDT.

KENTON, O., Oct. 20, 1885.

To the Editors of the THERAPEUTIC GAZETTE:

GENTLEMEN:—The letter of Dr. Chassagne in the October number of the GAZETTE calls to my mind that during the winter of 1881 and 1882 typhoid fever prevailed as an epidemic in this village and the surrounding country. The type of the disease varied from a mild catarrhal nature to the malignant and ataxic. Two cases I remember occurred where intermittent fever in one was a complication, in the other a sequela, as follows:

Mrs. N., aged 35, delicate, of nervous temperament, under the care of Dr. Madison of this place, who informed me that on the fourteenth, fifteenth, sixteenth, and seventeenth day of her fever she had had a chill, coming on about 11 o'clock A.M., followed by great elevation of temperature, and asked me to see her with him on the eighteenth day, which I did, seeing her about 10 o'clock A.M. At that time her body-heat was 103°. At eleven the chill came on, and at 11.30 her temperature was 106°. She had already been taking quinine, which at my suggestion was increased, and powdered capsicum added. The next day the paroxysm failed to recur, and the fever progressed the usual course, ending in recovery after the twenty-eighth day.

The second case was a young gentleman,

aged 24, who after six weeks of fever had a distinct chill, followed by undue elevation of temperature, that recurred again on the third day, to whom I gave quinine freely, with the result of having no other trouble.

I observed numbers of cases in which I conceived malarial complications to be manifest, producing the so-called typho-malarial fever, but no other where it assumed the form of distinct intermittent fever.

Respectfully,

J. T. CLEGG, M.D.

SILOAM SPRINGS, ARK., Oct. 20, 1885.

ROCKTON, ILL., October 20, 1885.

GENTLEMEN :—In your last issue the THERAPEUTIC GAZETTE contained an article, written by Eugene J. Chassagne, viz., "Intermittent Fever a Sequel of Typhoid Fever." One year ago I treated Miss W., aged 20, who had a severe attack of typhoid fever. Delirium constant from the eighth till the fourteenth day, when the maximum was reached. The thermometer registered 104.8° F. From that time she began to improve. Convalescence was well marked by the 26th. Three days after I was called in haste. Found her suffering from a chill, then fever, sweating, etc.,—a well-marked case of intermittent fever. Her recovery was slow but sure. I did not consider it a sequel of the typhoid, nor do I yet, but the result of malaria. In fact, all of these cases should be placed in the list of typho-malarial, with the typhoid most prominent,—in fact, the only symptom showing itself,—yet the germ or miasm is there, to reveal itself later. I do not believe intermittent fever to be any more a sequel of typhoid than for remittent fever to be converted into typhoid; there is not a metamorphosis of the one in the other, but a combination of both, with the phenomenon of one or the other predominating, while the least may show itself after a time.

Yours truly,

H. D. F.

CHLOROFORM TREATMENT OF TAPE-WORM.

To the Editors of the THERAPEUTIC GAZETTE:

GENTLEMEN: — Seeing in almost every number of your journal an article on the treatment of tape-worm with chloroform, I am reminded that Dr. Simonds, of Cleburne, Texas, in 1879, gave me his experience in a case occurring some years before in the Brazos bottoms. He was called to see a stout man apparently suffering from colic, to whom, after exhausting the usual remedies, he gave a teaspoonful of chloroform. The colic not yielding and the patient's bowels having failed to be moved by an enema, he gave him 2 drops of croton oil, when, much to his surprise, the patient passed a large tape-worm, and was entirely relieved. The chloroform had anæsthetized the worm, causing it to relax its hold, and whilst in this condition the croton oil had expelled it entire.

This was the first time that I had ever heard of this treatment being resorted to, and although in the hands of Dr. Simonds the result of accident, yet I believe to him belongs the credit of first having used it.

SAMPSON POPE, M.D.

NEWBERRY, S. C.

BERLIN.

(From our special correspondent.)

MENTHOL—A VALUABLE SYMPTOM TO BE NOTED IN THE ADMINISTRATION OF SALICYLIC ACID—NEURINE—EXTEMPORIZED IODOFORM GAUZE.

Menthol in an ethereal, alcoholic, or, better, in an oily solution, is an able substitute for cocaine in many respects, without, of course, rendering such valuable and manifold services as the latter. Still, the fact that menthol reduces temporarily the sensibility of mucous membranes and of the skin might be made use of to advantage all the more, as the excessively high price of cocaine forbids its exhibition in general practice.

When visiting the rheumatic station of the great Magdeburg Hospital, Dr. Aufrecht, the physician-in-chief, called attention to a peculiar symptom invariably observable in the course of exhibition of either salicylic acid or salicylate of sodium, when the system, as it were, was saturated with the drug,—viz., a long-drawn sighing respiration. This symptom, then, was always taken for an infallible indication that the system was well under the influence of the drug, and that the latter had to be stopped. It is clear that this peculiar symptom, of which we do not remember to ever have seen any mention in any journal, is sufficiently valuable to be borne in mind.

Another synthetical product, under the strange name of neurine, has been recently placed in the European market. In chemical respects it is found to be the trimethyloxethyl, or, according to another analysis, the trimethylvinylammonium. The therapeutic effects of the drug are said to represent the combined action of curarine and muscarine, and to show an antagonism to atropine.

Of all surgical dressings at present in vogue in Germany the iodoform gauze occupies, on account of its powerful antiseptic and at the same time non-toxic properties, the foremost rank. In hospitals where immense quantities of the dressing are used an *extempore* preparation of the latter is often resorted to, which consists in preparing an ethereal solution of the iodoform by trituration in a porcelain mortar, by carefully washing and drying the gauze, and finally spreading the gauze in the air, after soaking in the iodoform solution, to allow the ether to evaporate. This simple procedure enables every practitioner to prepare this indispensable article himself at a low cost and in a short time.

Notes and Queries.

KOUMISS.

Editors THERAPEUTIC GAZETTE:

GENTLEMEN:—Please explain, through the GAZETTE, the method by which koumiss is prepared. Many physicians are so far distant from the large cities that they cannot order for their patients. The knowledge of how a good quality of koumiss can be prepared at home will prove invaluable to many of your readers. State where the dried koumiss can be obtained.

A. CRAWFORD, M.D.

MILES, IOWA, September 26, 1885.

[We have published this year a recipe for making a koumiss, which, if not entirely equal, in all probability, to the article made in Asiatic Russia, certainly is as good as any obtainable from our drug-stores. At the request of our correspondent we repeat the formula.

Take of milk, one pint; white sugar, one tablespoonful; yeast, one-sixth of a Fleischman's Vienna cake as sold in Philadelphia stores. We believe one of these cakes is about equivalent to one-half pint of ordinary yeast, but persons making their own yeast in the country will have to get its exact value in this formula by a little experimentation. The sugar is to be added to the milk, then put into a bottle which can be tightly corked, and the yeast poured in; the whole well shaken, thoroughly corked, and put in a warm place for from six to twelve hours, according to the temperature and strength of the yeast and the variety of koumiss desired. The longer the fermentation the more sour the koumiss. On removal from the warmth, the bottle is to be well shaken and be put upon ice to cool. This koumiss may be kept one or two days, but is best when prepared when wanted. In practice we have found it more convenient to use an ordinary beer-bottle, with a patent stopper. As the conditions of this formula are not absolute, a little experience is usually necessary to get a good article. Dried koumiss is not a commercial article, so far as our knowledge goes, and if commercial may be considered worthless. Possibly our correspondent is thinking of the Kefir ferment, which has been written of in the GAZETTE as a peculiar yeast-like fungus which yields a particularly good article of koumiss. We have never seen it, and think it cannot be obtained in this country.—EDS.]

POISONING BY CHLOROFORM INTERNALLY ADMINISTERED.

Since chloroform administered internally in the treatment of tape-worm has frequently been referred to in these columns, the following case of poisoning through the accidental administration of an overdose, reported in the *New York Medical Record* for October 3, by DR. J. M. LATTA, of Millerton, Kansas, is deserving of attention:

The case was that of a boy, 6 years of age, suffering from tape-worm, for whom he ordered a mixture of 1 part chloroform in 3 parts simple syrup, of which one teaspoonful was to be given every hour until four doses had been taken. By mistake the parents gave the mixture in tablespoonful doses. Twenty minutes after he had taken the fourth dose of the mixture the boy said the medicine was "about to kill him;" he reeled like a drunken person and vomited violently, throwing up mucus tinged with blood. The child was rational when first seen by Dr. Latta, and said that his stomach hurt him, but in a few minutes he became unconscious. The pupils were normal, the breathing easy, and the pulse a little accelerated, but regular, and rather full and bounding. The face was covered with an even red flush, arterial in tint. The temperature was not taken. It was impossible to arouse the boy by calling or shaking him. All the pillows were removed, the body was placed straight and all constricted portions of clothing loosened, and fresh air was freely admitted into the room. The pulse and respiration were carefully watched, but as they furnished no special indications for treatment, nothing more was done. The pulse became gradually less rapid, the flush disappeared from the face, and in an hour and a half the boy awoke and expressed himself as being all

right. A saline was administered a few hours later and the bowels were moved, but there was no appearance of any tape-worm.

POISONING BY THE SEED OF DATURA STRAMONIUM, WITH RECOVERY.

In the *New Orleans Medical and Surgical Journal*, October, 1885, DR. MCCUTCHON states that he was called on August 21, 1885, about 12 M., to see Mrs. W., and her son, H. C. W., aged 26 years. He found the mother in bed, complaining of headache, a sense of weakness and great thirst. The pupils of both eyes were widely dilated, the tongue and fauces very dry, pulse rapid. There was partial delirium. He was informed that about eight o'clock the whole surface of the body had become very red and swollen. Neighbors, recognizing that poison of some kind had been swallowed, gave an emetic, which produced frequent vomiting. The only symptoms that the son presented, at the time of Dr. McCutchon's visit, were dilated pupils, thirst, and swollen hands and arms. He says that he first noticed that he could not see distinctly while in the car, at 7 A.M., on the way to his work. Very soon thereafter he had confusion of ideas and dryness of throat; when he arrived at his shop, about 8 A.M., he was told that he was intoxicated; while attempting to work he fell to the floor; water was thrown over him and he recovered sufficiently to get home by means of the cars.

Dr. McCutchon obtained the following account as bearing on the cause of these symptoms:

On August 20, a friend gave the mother a branch of datura stramonium, to which were still attached the leaves and some capsules, which contained nearly ripe seed. The leaves were stripped from the stalk and mixed with lard to form a salve; this done in a skillet. Some coffee was on the table, and a few of the seed from the capsules, which had been opened, became mixed with the coffee. Moreover, the coffee was parched in the same skillet in which the salve had been made.

Next morning this mixture was ground, and an infusion made which was drunk by the mother and son about 6 A.M., and in one hour's time the symptoms of poisoning were manifest as described. By 4 P.M., all these abnormal manifestations had nearly disappeared.

The only treatment that was used was sulphate of morphine in ⅛ grain doses every two or three hours.

In this connection the following case, from the *British Medical Journal* for September 19, 1885, is of interest, as illustrating the antidotal effects of pilocarpine to stramonium.

"Dr. Ladislas Roth, of Nagy Bajom, Hungary, was called, at 1 P.M., to a little girl, aged 4, in a druggist's shop. She was quite insensible, with widely-dilated and insensitive pupils, the face and body being swollen as if dropsical, and covered with a scarlatiniform rash. She was very restless, throwing herself about in all ways, groaning and gnashing her teeth; the pulse was 146, small and weak; the respirations 40, superficial; the temperature 39.5° Cent. (103.1° Fahr.). No urine or stool had been passed since the commencement of the symptoms. The mother said that other children had told her that the child had eaten two handfuls of sweet ripe stramonium fruit, and when she saw her at eleven o'clock, she had seemed ill, and unable to stand on her feet. She had called the government medical officer, who prescribed a mixture containing 2¼ grains of tartar-emetic. The druggist, however, being of opinion that that would not do any good, took upon himself to give a solution of sulphate of copper instead. In the vomit which the copper had produced a number of berries of datura stramonium were seen. Dr. Roth, remembering a case of atropine-poisoning he had seen reported by Professor Purjek, which had been cured by pilocarpine given subcutaneously, administered, at twelve o'clock, ½ centigramme (1/11 grain) of pilocarpine in 5 centigrammes of water, by means of a Pravaz's syringe. No salivation or sweating followed, but no improvement was detected; and, at a quarter to three, a centigramme was given. The red rash and the swelling diminished. At three, another centigramme was given. The child cried, and shortly began to show various signs of improvement, even answering "Yes," when the mother asked if she were ill. The injections were continued. Up to five o' clock, 5½ centigrammes had been given. At six, the pupils had become almost normal, and the pulse 120, and temperature 39.8°. She was able to speak quite plainly, and wanted something to eat. All this time there had been no sweating. At seven o'clock, as her condition appeared somewhat less satisfactory, ½ centigramme more was given, and this brought on both salivation and sweating. She made a rapid recovery. Altogether, 6 centigrammes of hydrochlorate of pilocarpine were administered, 5 of which, the writer considers, were required to neutralize the datura."

A CASE OF ATROPINE-POISONING SUCCESSFULLY TREATED BY JABORANDI.

Dr. Suzuki reports in the *Transactions of the Sei I Kwai*, August, 1885, the case of a woman aged 19, who drank a tablespoonful of "miso shiru" (a kind of pea-soup) in which a certain quantity (about half a grain) of sulphate of atropine was mixed by an insane person. Immediately after she felt a disagreeable bitter taste, so that she tried to vomit by tickling the throat with her fingers, and succeeded in vomiting a small amount of the contents of her stomach. About half an hour after the event she complained of headache, giddiness, flushing of face, dryness of mouth, and weariness. When she came to Dr. Suzuki her pulse was frequent, the conjunctivæ were congested and the pupils were greatly dilated, the mouth and the nares were dry. He gave her immediately a solution of 8 grains of tannic acid in one and a half ounces of water, and repeated again the same dose after five minutes' interval; at the same time with it the ice-bag was applied to her head, but the symptoms continued to increase in severity and without the slightest effect being produced by the measures taken. At 11 o'clock A.M., paralysis of the tongue was noticed, articulation and deglutition became difficult, the extremities were cold, the pulse was weak and thready, and she was restless and delirious, presenting symptoms almost like those of insanity. A warm infusion of jaborandi, 1 grain of the leaves to 4 ounces of boiling water, was administered at once, and in about ten minutes after its exhibition the serious symptoms gradually subsided. After about an hour and a half the pupils began to contract, the tongue moistened slightly, and the articulation became distinct, but general debility, paralysis of the left arm, thirst, and fulness of the stomach persisted. At this time the patient said that she felt as if the intoxication had passed over, but she did not recollect what had occurred during the attack. The next morning she only complained of a slight headache and diminished appetite. No other symptoms remained.

EUONYMIN.

The word "euonymin" is now used to designate a number of compounds, and it is really surprising that this has not yet led to some serious results. Beginning with the most poisonous of the euonymins, we have the one discovered by Hans Meyer in 1882, in the bark of Euonymus atroporpureus. It is prepared by exhausting the bark with alcohol, concentrating the extract, precipitating with basic lead acetate, neutralizing the filtrate with magnesium carbonate, and precipitating with tannic acid. The precipitate is mixed with zinc and extracted with alcohol. From this alcoholic solution the euonymin is obtained in crystals, which are slightly soluble in water (1 to 2000). When heated with dilute mineral acids, it is split up into a resin and a sugar, showing that it is a glucoside. To distinguish this from the other euonymins, it should be known as *Meyer's euonymin.* It is contained also in the root of Euonymus atropurpureus, but could not be detected in Euonymus Europæus. The new remedy has the same mixtures as the active glucosides of digitalis pur., and is just as poisonous when introduced into the blood or under the skin, while it also produces the same remedial effects in heart-disease and dropsy, producing only slight effects, however, from the stomach. This euonymin is now manufactured on a large scale.

In a recent examination of Euonymus atropurpureus, H. Paschkis arrived at altogether different results. He found that the euonymus pur. possessed no medicinal properties, and only contained mannite.

Still different results were obtained in America. Carpenter, in 1845, was the first one there to report on the excellent results obtained by the internal use of the bark of Euonymus atropurpureus. In 1861–62 analyses of the bark were made by Clothier, Prescott (?), and Wenzell, in the course of which a glucoside was found. As its preparation is not like that of Meyer's, we must distinguish it as *Wenzell's euonymin.*

The name is altogether misused in America by being further applied to two or three resinous substances, which must be well distinguished as *American euonymins.* According to Thibault (1884), there are one green and two brown resins. The brown is fluid, the other solid. All that is known of these three resins is that they are relatively not poisonous and act as laxatives. The increased secretion of the bile by these euonymins, which was claimed to have been observed by Rutherford, has recently been very much doubted. Vignal and Dodds recommended their use against hemorrhoids. Constantin Paul and Conil compare their effects with those of podophyllin.

To complete the confusion, Rieder has named another body euonymin,—namely, a so-called sub-alkaloid obtained from the fatty

oil of the seed-kernels of Euonymus Europæus: *Rieder's euonymin* has been declared to be a mixture of a bitter substance and a resin. Nothing has yet been published on the medicinal properties of this compound.

Finally, a resin which is partly neutral and partly acid has been found in the bark of Celastrus scandens, often called Euonymus spurius. This resin (*celaster euonymin*) is also at times called euonymin. As all physicians and pharmacists cannot be acquainted with all these variations, it is well to call their attention to them, and to warn them not to transfer the teaspoonful doses of the American euonymin to the glucoside of Meyer.—*Druggists Circular*, September, 1885.

THE ORDEAL BEAN OF MADAGASCAR.

The physiological properties of the ordeal bean of Madagascar (Tanghinia venenifera) have formed the subject of an investigation by M. Ch. E. Quinquand (*Comptes Rendus*, ci., p. 534). The principal feature consists in an increase of medullary reflectivity in animals: the respiration is at first accelerated, then slowed, and the animal dies from arrest of respiration, the heart continuing to beat. The poison has been administered to human beings for different diseases, and appears likely to be useful in toxic paralysis, trembling (palsy), and want of tone in the intestines, and in two cases of nocturnal incontinence of urine it has proved of service. The symptoms for discontinuing its use are the appearance of headache and nausea, vomiting, and a certain degree of feebleness.—*Pharm. Journ. and Transactions*, October 3, 1885.

PARALDEHYDE AN ANTIDOTE TO STRYCHNINE.

According to the *Chemiker Zeitung*, Professor Bokai, of Klansenburg University, has found paraldehyde to be an excellent antidote to strychnine, rabbits having been found to bear with immunity ten times the lethal dose of strychnine when the poison had been previously mixed with paraldehyde.

Chloraldehyde has often been used in cases of poisoning with strychnine, but this substance acts injuriously on the heart, while paraldehyde does not.

In cases of human poisoning, Professor Bokai recommends a dose of from 6 to 10 grammes (1½ to 2½ drachms) of paraldehyde twice daily until prolonged sleep sets in; but at present no case has occurred admitting of experiment. Herr Bokai further suggests the use of paraldehyde as an antidote to brucine, thebaine, and picrotoxine.

Simultaneously with Bokai, Cervello and Dujardin-Beaumetz have likewise claimed the recognition of paraldehyde as an antidote to strychnine.—*American Druggist*, October, 1885.

CURIOUS SYMPTOMS THE RESULT OF SNAKE-BITE.

Dr. A. Leahy reports in the *Indian Med. Journ.*, September, 1885, a case of a man, aged 42, who was engaged in marking down game on May 29, 1885, when he trod upon a snake and was bitten on the dorsal aspect of his right second toe. The reptile was about a foot and a half long, and is described as being earth-colored, with a stumpy tail and a flattened, diamond-shaped head. By the Kashmiris it is called "Gunas." Within ten minutes of the time he was bitten the toe began to swell, and the leg became exceedingly painful. At the expiration of half an hour the man felt giddy, his vision suddenly failed, and he became insensible. When brought to the hospital he had recovered his senses, but presented the following curious symptoms: He had double divergent strabismus, diplopia, dilatation of both pupils with loss of the power of accommodation, right-sided facial palsy, deviation of the tongue to the right when protruded, and loss of muscular power of the right arm and leg accompanied by anæsthesia. His speech was slow and thick; pulse 60, and intermitting every five or seven beats. These curious nervous symptoms improved day by day, the squint disappearing first, and being followed by recovery of the power of visual accommodation; next the paralytic condition of the tongue passed away, and was followed by recovery from the facial palsy, anæsthesia, and loss of motor power in the right upper and lower extremities, the lower one recovering first. By June 12, ten days from the date on which he was bitten, the man was quite well, and able to work. He never had any pyrexia, nor at any time did his urine contain albumen.

The two most common venomous snakes of Kashmir are the *Trimeresuris Monticola* and Haly's *Himalayesmus*, both crocodile vipers. The latter is found only at great altitudes, and is but feebly venomous; the former is much the more common of the two, is found on the low hills in Kashmir, and is probably the reptile by which the man was bitten. All

the man's symptoms appear to point to the absorption of an inhibitory poison by the blood, and its action upon the basal cerebral ganglia giving rise to the paralytic conditions above described.

ŒDEMA OF GLOTTIS FOLLOWING UPON THE THERAPEUTIC ADMINISTRATION OF IODIDE OF POTASSIUM IN A CASE OF TABES.

HUCHARD communicates to the *France Médicale* (No. 63) the following interesting observation :

A person was admitted to the Bichât Hospital with locomotor ataxia, and presenting no syphilitic nor alcoholic history, was placed on the iodide of potassium, of which he was given 60 grains *pro die*. As erythema and conjunctivitis appeared, the drug was suspended, but after a lapse of several days taken up again in doses of 3 grains, and, finally, increased to 15 grains *pro die*. Again untoward and still more serious results than before set in,—viz., dyspnœic paroxysms deepening into suffocation. A laryngoscopic inspection revealed œdema of the glottis. During an attack of suffocation tracheotomy had to be performed, but the patient rallied and may now be regarded cured. Speaking on this case before the Medical Society of Paris, Huchard designated the iodide of potassium as the cause of these ill effects, though he thought that the heightened reflex sensibility of the patient (on account of the locomotor ataxia) could have created a predisposition. The chemical examination of the employed iodide of potassium proved the latter to be impure and to contain a certain quantity of iodates.

Rendu remarked it is likely that the patient had interstitial nephritis as well as tabes; he recalled several cases in which patients with this affection showed symptoms of an exceedingly threatening coma after the ingestion of only 15 grains of iodide of potassium. Lacombe disputed that renal lesions could have produced this singular intolerance, and thinks that the stated reasons added to a possibly existing idiosyncrasy sufficed to explain the toxic symptoms observed.

Guyot remarked that, in prescribing iodide of potassium, he always took into consideration a possible personal susceptibility regarding the drug, and invariably began with very small doses before arriving at large ones; in cerebral syphilis he had often given as much as 3 drachms *pro die*. He thus tested, as it were, the individual susceptibility. Large doses are, as a rule, better borne than small ones on account of the greater diuretic action.

Bearmann referred to an instance which proved the immense susceptibility of the system regarding iodide of potassium. A patient received once a prescription of iodide of potassium calling for 3 drachms, and by an inadvertency the same prescription was filled daily for three years without causing any accidents.

These interesting remarks were concluded by the recommendation of a physician to use the iodides of calcium or of sodium, or the syrup of iodo-tannin, which had the same action as iodide of potassium, but were more apt to be free from impurities than the latter.

COCAINE IN REFLEX DIARRHŒA OF TEETHING.

DR. K. I. GRAVES (*Chicago Med. Times*, September, 1885) has found that bathing the gums at intervals of half an hour with a four per cent. solution of cocaine served to arrest diarrhœa in children in whom this symptom was evidently due to irritation from teething.

TREATMENT OF ITCH.

COMESSATI recommends the following treatment of itch as more simple and successful than any other hitherto used (*Journal de Méd.*, No. 4, 1885) : 200 grammes (6¼ oz.) of hyposulphite of sodium are dissolved in a litre (1 gt.) of water, and the entire body, before retiring, is treated with this solution. On the following morning the body is treated with a solution containing 50 grammes (2 oz.) of hydrochloric acid in a litre of H_2O. The explanation of this treatment is very simple: sulphur in a state of fine division settles in the pores and remains there for a long time ; sulphurous acid and chloride of sodium are also formed. These two results of this reaction are both toxic to the acarus, and the affection is usually cured by a single application.

IN the *Imperial Maritime Customs Reports*, 28th issue, DR. C. H. JOHANSEN, of Tamsui, recommends chaulmugra oil as a remedy in Chinese leprosy. The patient takes a 5-grain pill after each meal, that is, 15 grains a day, and continues the treatment for about six months. The improvement takes place after one month. The doctor says, "In some cases it was quite surprising, the spots getting paler and disappearing, and sensibility coming back in places that had been anæsthetic for years."

THE DEATH OF M. CHARLES ROBIN.

This eminent histologist died from apoplexy, at the age of sixty-four, on Tuesday, October 10. Since 1852 he had been professor of histology at the Faculty of Medicine, and since 1875 was one of the senators for Ain, and by his death the French Senate loses almost its only scientific man.

TREATMENT OF HABITUAL CONSTIPATION.

Dr. William Murrell writes to the *British Medical Journal* for September 19, 1885, that he has recently been using the Friedrichshall water in a variety of cases in hospital practice, and he finds it to possess the same valuable therapeutical qualities which explain and enhance its long-established reputation as a favorite aperient in habitual constipation and in the wide range of cases in which it is desirable to employ a laxative of mild character and fitted for continued use. Friedrichshall has a special constitution which secures to it marked preference over the ordinary sulphate of magnesia waters and over the ordinary in general use. Its special advantages are probably largely due to its combination of chlorides with sulphates. It is not merely a saline aperient, but it has valuable properties in influencing tissue-change and promoting excretion of uric acid. Thus its use is attended with excellent results in cases of congestions of the liver and kidney, as a corrective of the digestion and as what may be familiarly described as a tonic-aperient. Friedrichshall realizes in practice the valuable curative powers ascribed to it by the eminent German physicians with whom it has long been a standard prescription.

COCA-LEAVES IN GASTRALGIA.

In a case of gastric ulcer, accompanied by frequent and profuse hemorrhages and an abnormally intense gastralgia, coming under the observation of Dr. Grassl, of Grossau (*Pharm. Post*, June 20, 1885), this physician thought of prescribing cocaine after all known narcotics, exhibited alone or in combination with numerous analgesic and sedative mineral or vegetable drugs, had failed to relieve the patient. The latter being, however, a poor man, the doctor soon saw that a few ounces of a one or two per cent. solution would consume the entire fortune of his patient, and perhaps have not the desired effect. Hence the idea of prescribing cocaine had to be dropped.

If, the doctor calculated, a one per cent. solution of cocaine acts well, a strong decoction of the coca-leaves is likely to act similarly, and as he accidentally possessed some supply of the leaves, he ordered 5 grammes (75 grains) of them to be boiled with double the quantity of water, the whole to be evaporated to one-half of its original bulk, to be strained, and water to be added until 150 grammes (4½ oz.) were obtained, and to drink a cupful three times daily lukewarm.

The decoction had a dark brown color, an agreeable odor, and was readily taken. The success of this treatment was so decided that after five days every medication could be dispensed with. Having since employed the decoction of the coca-leaves in two other cases of gastralgia, Dr. Grassl thinks himself well justified in recommending this treatment.

The decoction of coca-leaves seems well worthy of a trial in gastralgia and similar conditions in which pain and fatigue are the salient pathological factors. It is well known that the leaves, either chewed or taken in a warm infusion, quench the sensation of hunger, and fortify the system against toil and hardships. The drug is therefore well suitable for troops on marches and expeditions, and, as we recently read in a secular journal, will probably be employed by the British government for the Indian armies.

TREATMENT OF CONGESTIVE DYSMENORRHŒA.

Dr. Mascarel recommends the following treatment of dysmenorrhœa as more successful than any other he ever employed. The patient is directed to take first a prolonged warm bath, and is then placed in a horizontal position on a frame-work in the bath-tub, whereupon douches of mineral vapors are thrown against the circumference of the pelvis and vulva. After that a water-douche of 43° C. is directed over the entire pelvic region from all sides, the time of the douches varying from five to twenty-five minutes. After that the patient is plunged into a warm bath of a temperature of 35° C., and after thirty minutes is ordered a large glass of Madeleine water of a temperature of 43° C. This treatment is continued for fifteen to twenty-five days according to the indications of each case, and recommends itself well to every practitioner by the facility of its execution.—*La France Médicale*, No. 71, 1885.

COCAINE IN SEA-SICKNESS AND CHOLERA NOSTRAS.

Although all bacteriological researches have hitherto failed to discover the "bacillus of sea-sickness," the long-looked-for infallible remedy and even preventive of this wretched malady is at last claimed to have been secured. The "claim-everything" policy which has of late infested professional journalism is to be totally abandoned before we can again accept with confidence a therapeutic commendation from every quarter. "They have been weighed and found wanting" can with propriety be said of most therapeutic novelties; but as the remedy eulogized in sea-sickness is cocaine (*vide* report of DR. MANASSEIN, of St. Petersburg, in the *Berlin. Klin. Wochenschrift* of August 31, 1885), and this drug has asserted nearly all of its alleged virtues, it may be worth while to give it a trial. The following is the mode of administration, in which the drug in Dr. Manassein's hands has proved a cure and preventive of sea-sickness:

℞ Cocain. muriatis, gr. ii;
Spir. vini rectific., q. s. ad solv.;
Aquæ dest., f℥v. M.
S.—f℥i every two or three hours.

The same author reports two cases of cholera nostras marked by symptoms of collapse and such intense vomiting that no medicines could be administered internally. Both cases were relieved by an ice-bag placed upon the medulla oblongata and the administration of cocaine, which was thus rendered admissible.

SALICYLATE OF METHYL.

Salicylate of methyl has been proposed as a therapeutic agent to supersede salicylate of sodium. It colors salts of iron violet, is insoluble in water, of a light yellow shade, and has an agreeable smell. It has been proved to have no effect on cold-blooded animals (the frog, etc.), except when it is applied in subcutaneous injections in large quantities at the same time as the animal is breathing air charged with salicylate of methyl. The salt absorbed is partly distributed in the system, and partly discharged by respiration and the other forces of nature.—*Med. Press*, Sept. 9, 1885.

A NEW MYDRIATIC.

According to DR. PIERD' HOUV, scopoline, a new alkaloid discovered in scopolia japonica, dilates the pupils more rapidly than atropine. Its action is not only very energetic, but it lasts longer; on the third day, when scopoline has been instilled, the pupils are more dilated than after the instillation of atropine. Scopoline appears to have no irritative effects on the conjunctiva, and is a strong antagonist to the action of eserine.—*La France Médicale*, September 26, 1885.

THE TREATMENT OF NÆVUS BY ETHYLATE OF SODIUM.

MR. SAMUEL WELSH states, in the *British Med. Journal*, August 22, 1885, that for some months past he has been extensively employing ethylate of sodium in the treatment of cases of nævus occurring in children, and up to the present time has every reason to be satisfied with its use. He paints over the nævus two coatings of the ethylate on two consecutive days, taking care to protect the surrounding skin before the application, and in all instances of superficial nævi thus treated he states that he has found them cured on the separation of the scab. Cases which affect the subcutaneous tissues generally require a second or even in some cases a third repetition of the remedy. This treatment seems to leave less scar than nitric acid, and to cause less pain to the child.

THE TREATMENT OF HYDROCELE BY INJECTIONS OF CORROSIVE SUBLIMATE.

SARRAZIN (*Thèse de Paris*, 1885) reports five cases of hydrocele treated by the injections of solutions of corrosive sublimate, one part in a thousand. The advantages of this mode of treatment would appear to be the harmlessness of the injections and the character of the inflammatory reaction which it produces, which, while sufficient to cause adhesion, is too feeble to cause suppuration. In the five cases which were subjected to this treatment, cure was obtained without the production of any symptoms of mercurial intoxication.

ADONIS CUPANIANA.

Our readers will remember the therapeutic action of adonis vernalis renders it an able substitute for digitalis, being free from the great objection attaching to the latter, viz., its accumulative effects. CERVELLO, the well-known Italian therapeutist, has lately discovered that adonis cupaniana, frequently used in Sicily, has the same action as its sister-plant. The

active principle which Cervello succeeded in extracting from adonis cupaniana proved to be identical with adonidine.—*Chim. Med. Pharm.*, 1885, Nos. 4, 5, p. 295.

YERBA SANTA AND GRINDELIA ROBUSTA IN BRONCHITIS.

DR. E. STUVER recommends in the *Medical News*, October 24, the following prescription as being extraordinarily valuable in the treatment of bronchitis, both acute and chronic. More reliance could be placed upon his statement if he had differentiated more clearly the stages of the diseases. We suppose, however, that it is to the advanced stages of bronchitis, when the secretion is free, that he refers.

℞ Fl. ext. grindeliæ robustæ,
Fl. ext. yerbæ santæ, aa ʒi;
Syrupi tolutanæ vel simplicis, q. s. ad fʒiii. M.
Sig.—ʒi to ʒii every hour or two when needed for cough.

CHROMIC ACID IN DISEASES OF THE NOSE AND PHARYNX.

RETHI recommends the use of chromic acid in diseases of the nose, pharynx, and larynx. Application is made by melting one or two crystals on a silver sound, washing out the nose with a five per cent. silver solution, touching the spot with the chromic acid, and then neutralizing the excess with soda. This treatment is indicated in chronic hypertrophic nasal and pharyngeal catarrh. The advantages of the treatment are said to consist in the absence of all symptoms of reaction.—*Deutsche Med. Zeitung*, 1885, No. 56.

TREATMENT OF VESICAL IRRITABILITY.

DR. A. F. ERICH writes to the *Philadelphia Medical Times* for October 3, 1885, that vesical irritability and frequent micturition, with burning pain at the meatus and much straining, particularly when the urine is alkaline and cloudy, are frequently relieved by the following combination:

℞ Acidi benzoici, ʒi;
Sodii biboratis, ʒiss;
Aquæ, fʒvi. M.
S.—Tablespoonful every three to four hours.

If the trouble does not yield to this medicine, Dover's powder in 3-grain doses every two to three hours is frequently found effective.

THE CONSTANT USE OF CHLOROFORM.

According to the Paris correspondent of the *British Medical Journal*, October 10, 1885, M. REGNAULT has observed from personal experience that repeated inhalations of small doses of chloroform produce insomnia. M. Dubois has noticed the same effect in chronic intoxication from chloroform. The condition also provokes neuralgic or rheumatic pains, extending along the limbs, and sometimes attacking the articulations. Sleeplessness is preceded by a condition of excitement, redness of the face, then an inclination to sleep, and accommodatory asthenopia. Brain-work becomes impossible, in consequence of incoherence of ideas. If at this period a power of sleeping remains, it is always broken by starts, just as after violent exercise has been taken. The limbs are often cold and numb. At an advanced stage trophic disturbance is manifested; the nails become soft, bunions appear on the toes, the patient grows thin and pale, and the circulation becomes faulty. About three years later on a circle of pain girds the waist, and profuse sweats appear, as well as all the symptoms indicative of serious anæmia.

THE THERAPEUTIC APPLICATION OF LACTIC ACID.

We have already alluded to the value of lactic acid in the treatment of malignant neoplasms, and DR. W. LURTZ reports in the *Prager Medicinische Wochenschrift*, September 16, 1885, four cases of lupus successfully treated by this application. It produces very little pain. The healthy tissue may be protected by smearing with ointment.

THE method employed by the Amis tribe of savages, which inhabit South Formosa, to harden their children might, perhaps, be adopted in this country with advantage. When born the child is immediately thrown into a tub of cold water, and then taken out and wiped dry. This is continued daily for about a month; after this it is taken every morning to the sea-beach or river, thrown into the water and allowed to struggle. This practice is pursued both in summer and in winter, until the child can walk into the water himself. It is said that the Amis children can usually swim long before they can walk.—*Chinese Imperial Maritime Customs Reports*, 28th issue.